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Volume I: NORTH COASTAL AREA

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STATE OF CALIFORNIA  
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Department of Water Resources

BULLETIN No. 130-75

HYDROLOGIC DATA: 1975  
Volume I: NORTH COASTAL AREA

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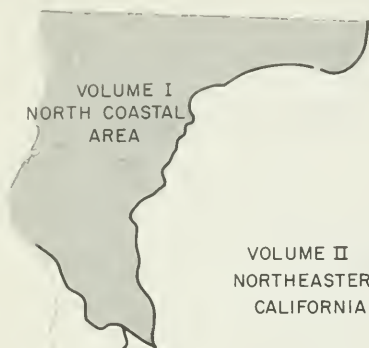
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VOLUME I  
NORTH COASTAL  
AREA


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Figure 1  
BULLETIN No. 130  
AREAL COVERAGE OF VOLUMES

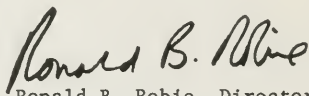
 Area covered in  
this volume.

## FOREWORD

The data collection programs of the Department of Water Resources have been designed to supplement the activities of other agencies to satisfy specific needs of the State. Bulletin No. 130-75 presents useful, comprehensive, accurate, and timely hydrologic data which are prerequisites for monitoring environmental conditions as well as effective planning, design, construction, and operation of water facilities.

The Bulletin No. 130 series has been published annually in five volumes since 1963. Each volume presents hydrologic data for one of five reporting areas of the State. These areas are delineated on the map to the left.

This Bulletin No. 130-75 is the last of this series to be published. It is to be replaced with a statewide Bulletin No. 130, "Hydrologic Data Index", which will show what data are available and where they may be obtained.

A handwritten signature in dark ink, reading "Ronald B. Robie". The signature is fluid and cursive, with the first name "Ronald" being more prominent and the last name "Robie" following in a similar style.

Ronald B. Robie, Director  
Department of Water Resources  
State of California

## CONVERSION FACTORS

### English to Metric System of Measurement

<u>Quantity</u>	<u>English unit</u>	<u>Multiply by*</u>	<u>To get metric equivalent</u>
Length	inches (in)	25.4	millimetres (mm)
		.0254	metres (m)
	feet (ft)	.3048	metres (m)
	miles (mi)	1.6093	kilometres (km)
Area	square inches (in <sup>2</sup> )	$6.4516 \times 10^{-4}$	square metres (m <sup>2</sup> )
	square feet (ft <sup>2</sup> )	.092903	square metres (m <sup>2</sup> )
	acres	4046.9	square metres (m <sup>2</sup> )
		.40469	hectares (ha)
		.40469	square hectometres (hm <sup>2</sup> )
		.0040469	square kilometres (km <sup>2</sup> )
	square miles (mi <sup>2</sup> )	2.590	square kilometres (km <sup>2</sup> )
Volume	gallons (gal)	3.7854	litres (l)
		.0037854	cubic metres (m <sup>3</sup> )
	million gallons (10 <sup>6</sup> gal)	3785.4	cubic metres (m <sup>3</sup> )
	cubic feet (ft <sup>3</sup> )	.028317	cubic metres (m <sup>3</sup> )
	cubic yards (yd <sup>3</sup> )	.76455	cubic metres (m <sup>3</sup> )
	acre-feet (ac-ft)	1233.5	cubic metres (m <sup>3</sup> )
		.0012335	cubic hectometres (hm <sup>3</sup> )
		$1.233 \times 10^{-6}$	cubic kilometres (km <sup>3</sup> )
Volume Time (Flow)	cubic feet per sec (ft <sup>3</sup> s)	28.317	litres per second (l s)
		.028317	cubic metres per sec (m <sup>3</sup> s)
	gallons per minute (gal/min)	.06309	litres per second (l s)
		$6.309 \times 10^{-5}$	cubic metres per sec (m <sup>3</sup> s)
	million gallons per day (mgd)	.043813	cubic metres per sec (m <sup>3</sup> s)
Water Usage	acre-feet per acre	.3048	cubic metres per square metre (m <sup>3</sup> m <sup>2</sup> )
Mass	pounds (lb)	.45359	kilograms (kg)
	tons (short, 2,000 lb)	.90718	tonne (t)
		907.18	kilograms (kg)
Power	horsepower (hp)	0.7460	kilowatts (kW)
Pressure	pounds per square inch (psi)	6894.8	pascal (Pa)

\* For greater accuracy, use conversion factors in "Metric Practice Guide"  
(American Society for Testing and Materials. E 380-72).

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APPENDIX F: WASTE WATER DATA, which appeared in certain volumes of the Bulletin No. 130 series, has been discontinued. For information regarding waste water, the reader is referred to the recently reactivated Bulletin No. 68 series: "Inventory of Waste Water Production and Waste Water Reclamation Practices in California".	

#### ABSTRACT

The report contains tables showing data on precipitation, surface water flow, ground water levels, and surface and ground water quality in the north coastal area during the 1974-75 water year. Figures show the location of climatological stations, surface water measurement stations, surface water sampling stations, and ground water basins.

#### ACKNOWLEDGMENTS

Valuable assistance and contributions were received from several agencies and many private cooperators. The cooperation of the National Weather Service (formerly the U. S. Weather Bureau) and the U. S. Geological Survey was particularly helpful and is gratefully appreciated.

A special note of thanks is extended to the many loyal and dedicated weather observers whose unselfish efforts have contributed immeasurably to our knowledge of historical weather conditions in the north coastal area.

State of California  
EDMUND G. BROWN JR., Governor

The Resources Agency  
CLAIRE T. DEDRICK, Secretary for Resources

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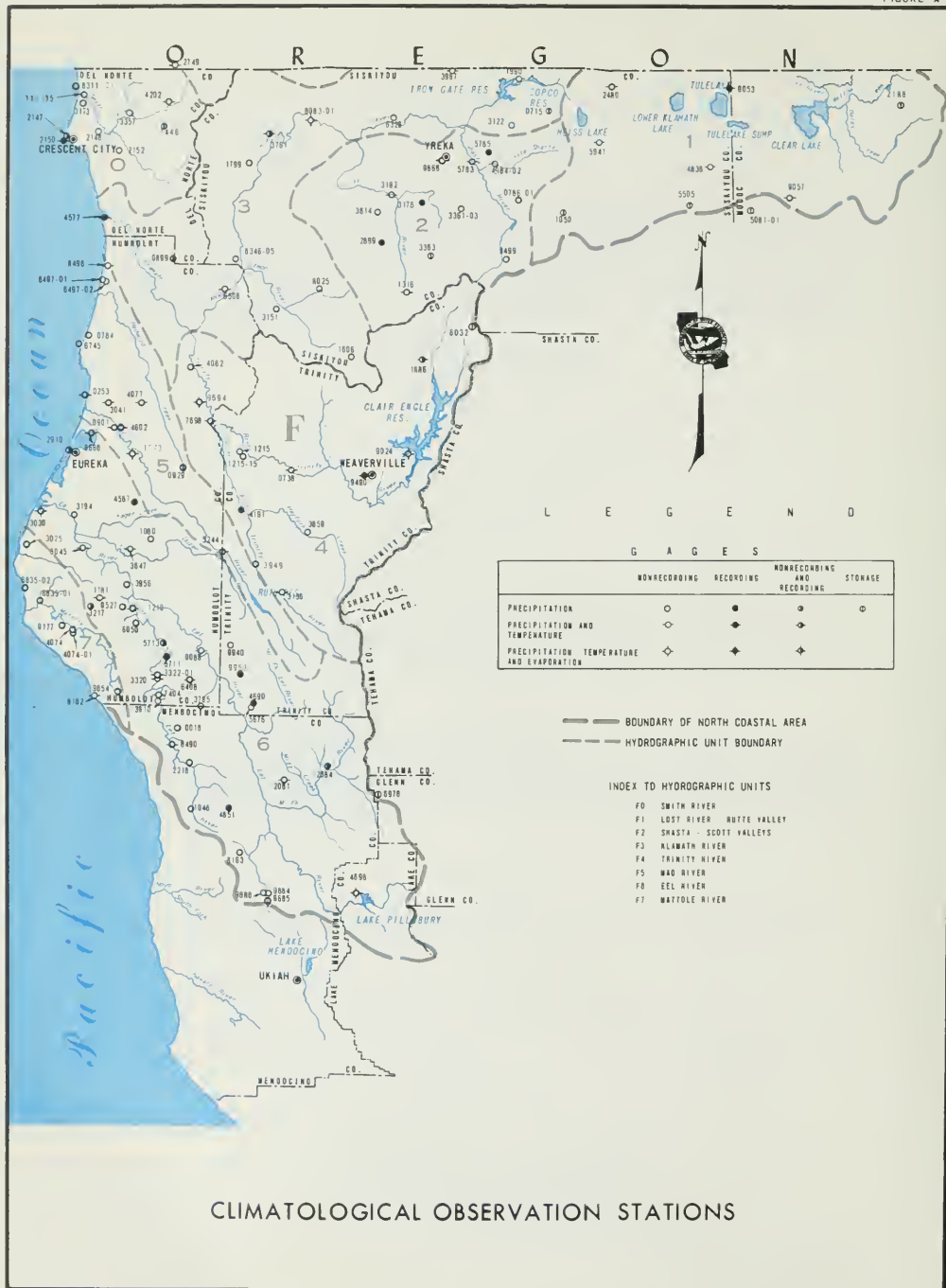
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## APPENDIX A

### CLIMATOLOGICAL DATA

#### TABLE A-1

#### PRECIPITATION IN NORTH COASTAL AREA DURING WATER YEAR 1975

Table A-1 summarizes monthly precipitation totals for selected stations for the 1975 water year, October 1, 1974, through September 30, 1975. The table shows stations by assigned number, name, and county. Location is defined by latitude and longitude in degrees to the third decimal, and stations are located on the map on the preceding page.

Precipitation values are shown to the nearest hundredth (.01) of an inch. Where digital recording rain gages are used, a zero is shown in the second decimal place, even though these instruments record to only the nearest tenth (.1) of an inch. The following notations are used to qualify the values:

- No record or incomplete record
- B Record began
- E Wholly or partially estimated
- N Record ends
- T Trace, an amount too small to measure

Precipitation data collected by the National Weather Service and local observers and cooperators in the north coastal area are available in greater detail in other reports. The National Weather Service publishes a report entitled "Climatological Data for California" and a companion volume, "Hourly Precipitation Data". Department of Water Resources Bulletin No. 165, "Climatological Stations in California, 1971, Indexed by County", contains station information on both active and historical precipitation measurement stations.

In addition, evaporation data and daily climatologic data, including temperatures, together with local conditions and qualifying remarks, are available in the files of the Department of Water Resources.

The county codes (CO) used in Table A-1 are shown below:

<u>County</u>	<u>Code</u>
Del Norte	08
Glenn	11
Humboldt	12
Lake	17
Mendocino	23
Modoc	25
Siskiyou	47
Trinity	53

TABLE A-1

## PRECIPITATION IN NORTH COASTAL AREA DURING WATER YEAR 1975

CO	STA	AU	LAT	LUNNIT	ELEV	STATION NAME	TOTAL	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
12	F0008000	123,400	435			ALBEMAR	37.49	2.14	2.41	7.07	6.43	15.14	14.74	3.08	.56	.19	0.01	0.27	0.00	
12	F5002500	123,400	435			ALBEMAR A P	23.18	2.00	3.19	9.47	6.41	10.51	14.55	3.55	.14	.23	0.15	0.88	0.05	
53	F0017300	123,400	127			BIG HAW RANGER STA	41.13	1.37	1.93	4.2	6.58	10.53	13.72	1.42	.44	.35	0.00	0.39	0.31	
23	F0018000	123,400	146			BRANSCOM 2 N	43.03	3.07	5.40	10.35	11.44	24.49	29.02	5.60	.88	.29	0.22	0.60	0.04	
12	F7010700	123,400	205			BRILEEVA - WOLF	.00	3.15	4.70	14.21	7.00	2.59	33.41	4.57	.51	.27	0.00	0.00	0.00	
12	F0018000	123,400	205			BRILEEVA - WOLF	46.94	2.91	5.34	14.45	4.49	26.35	26.06	5.02	1.34	.00	0.00	0.00	0.00	
12	F0018000	123,400	307			BRILEEVA - WOLF	12.13	2.80	3.90	.00	.00	.00	14.50	4.20	1.00	.00	0.10	0.60	0.00	
12	F0018000	123,400	307			BRILEEVA - WOLF	73.13	2.94	4.37	13.71	9.36	19.66	17.21	2.24	.74	.31	0.00	0.55	0.00	
12	F0018000	123,400	307			BRILEEVA - WOLF	65.04	2.43	3.40	11.24	5.47	17.60	16.33	3.69	.60	.11	0.04	0.31	0.00	
53	F0012150	123,400	215			BUTLER RANCH 15	53.66	1.58	4.38	4.71	6.25	11.01	15.32	3.78	.06	.46	0.02	0.63	0.55	
12	F5012300	123,400	215			BUTLER RANCH 15	.00	2.26	3.30	11.45	9.73	13.80	18.14	4.37	.00	.57	0.00	0.00	0.00	
47	F0018000	123,400	3130			CALLAHAN RANGER STA	19.33	.47	1.24	2.31	3.02	4.86	5.80	.79	.00	.05	0.27	0.15	0.15	
47	F0018000	123,400	3130			CECILVILLE 5 SE	35.74	1.11	2.55	5.00	5.03	6.25	11.00	1.93	.77	.32	0.17	0.62	0.00	
47	F0018000	123,400	3130			CECILVILLE 5 SE	61.72	1.07	3.45	9.24	6.00	15.68	17.80	3.17	1.22	.15	0.00	0.34	0.15	
53	F0018000	123,400	2501			COFFEE CREEK US	57.20	1.80	3.40	8.41	6.00	14.01	14.00	3.40	.20	.10	0.10	0.60	0.00	
47	F0018000	123,400	2501			COFFEE CREEK US	26.49	1.21	4.21	3.01	4.30	3.70	4.40	1.40	.34	.13	0.73	.45	0.25	
23	F0028100	123,400	1315			COVELO	46.19	2.62	1.74	5.10	7.01	11.89	14.75	2.07	.10	.00	0.50	0.27	0.02	
23	F0028100	123,400	1315			COVELO	.00	.00	1.00	.00	.00	4.00	12.60	1.40	.00	.30	0.00	0.00	0.00	
08	F0021470	123,400	154			CRESCENT CITY 1 N	63.04	1.02	4.34	12.23	9.11	13.60	14.61	4.14	.93	.46	0.10	0.14	0.60	
08	F0021480	123,400	154			CRESCENT CITY 7 ENE	45.17	1.68	6.14	15.36	11.16	17.96	26.41	6.30	.29	.37	0.12	1.72	0.01	
08	F0021500	123,400	154			CRESCENT CITY 7 ENE	78.00	2.00	4.00	13.2	10.50	15.0	16.40	4.00	2.00	.00	0.00	0.00	0.00	
08	F0021520	123,400	154			CRESCENT CITY 11 E	101.07	1.53	6.42	17.51	13.40	22.23	27.14	6.85	3.00	.00	0.00	0.00	0.00	
47	F0018000	123,400	1271			CUMMINGS	79.21	3.01	3.62	9.31	9.54	21.45	24.51	5.25	.82	.30	0.15	0.55	0.00	
47	F0018000	123,400	1271			CUMMINGS	15.08	.40	.45	3.53	1.44	2.54	3.10	1.23	.19	1.67	0.64	0.62	0.10	
23	F0024930	123,400	290			DORRIS BARNSEN	.00	2.00	3.74	4.02	3.22	18.95	18.42	6.01	.00	.41	0.00	0.00	0.00	
12	F0027400	123,400	2912			ELK VALLEY	46.49	1.40	7.55	13.29	11.36	26.82	26.72	5.19	2.15	.20	0.19	0.61	0.00	
12	F0027400	123,400	2912			ELK VALLEY	73.43	2.12	4.45	14.32	9.69	18.50	14.36	4.51	.63	.25	0.15	0.53	0.03	
12	F0029100	123,400	3174			FOOT DICK	40.13	1.76	2.75	6.41	5.20	7.68	10.73	3.29	.105	.58	0.10	0.58	0.01	
12	F0030100	123,400	2912			FOTDORRICK 4 D RCH	41.35	3.55	4.65	13.40	14.95	10.65	28.25	5.75	2.00	.60	0.10	1.35	0.00	
00	F0031220	123,400	290			FOTDORRICK SCHOOL	16.45	.73	.44	1.82	1.96	2.35	4.51	1.98	.00	.13	0.14	.44	.77	0.13
00	F0031300	123,400	290			FOREST GLEN	65.72	2.32	2.94	6.34	6.60	17.66	23.15	4.70	.00	.20	0.00	0.33	0.00	
08	F0031310	123,400	2912			FOREST GLEN	55.93	2.00	2.78	6.00	4.74	16.11	17.37	3.43	.52	.25	0.03	.24	.60	0.00
12	F0031310	123,400	3174			FOOT DICK	.00	.00	1.20	1.8	2.40	5.10	4.40	1.30	.40	.30	0.10	0.20	0.60	
12	F0031820	123,400	272			FOOT JONES RANGER ST	22.42	.42	1.51	2.17	2.74	7.13	4.40	.70	.23	.10	0.54	.25	0.02	
12	F0031940	123,400	124,150			FOOT JONES RANGER ST	.00	2.36	2.40	8.42	3.75	10.37	11.77	3.77	.60	.21	0.00	0.52	0.00	
12	F0032170	123,400	2501			FOX CAMP	.00	.00	5.36	15.84	.00	30.60	28.10	4.00	1.27	.52	0.00	0.62	0.02	
12	F0032170	123,400	2501			FOX CAMP	55.93	2.00	2.78	6.00	4.74	16.11	17.37	3.43	.52	.25	0.03	.24	.60	0.00
12	F0032220	123,400	137,704			GAMBERVILLE HNS	56.06	2.44	2.42	7.88	3.72	16.10	15.15	3.30	.76	.23	0.05	.42	.00	0.02
08	F0033570	123,400	364			GASQUET RANGER STA	43.11	1.57	5.49	15.70	12.27	20.27	25.02	6.44	3.24	.35	0.00	0.61	1.60	0.00
47	F0036100	123,400	2818			GREENVIEW	26.54	.35	1.65	2.77	3.41	6.80	2.80	2.55	.00	.10	0.10	0.01	0.01	
47	F0036100	123,400	2818			GREENVIEW	50.93	1.30	2.65	7.04	10.30	14.31	23.41	2.60	.89	.12	0.13	.25	.24	0.00
47	F0037850	123,400	1911			HARRY CAMP RANGER STA	66.38	2.44	3.49	8.42	5.21	13.21	17.14	10.54	.435	.85	0.28	.45	0.62	
47	F0038500	123,400	3174			HARVOR RANGER STA	34.17	1.24	1.31	5.51	3.30	9.54	11.11	1.55	.18	.22	0.00	0.18	0.38	
47	F0038740	123,400	300			HILTS	20.89	.46	1.86	2.80	2.80	4.68	5.12	1.30	.30	.17	0.30	.16	.55	
12	F7007400	123,400	38			HONEYDEW 2 WSH	.00	2.20	6.40	12.70	6.20	23.20	.00	.00	.00	.20	0.10	0.30	0.00	
12	F7007400	123,400	38			HONEYDEW 2 WSH	84.41	1.90	5.52	17.11	6.43	21.57	26.31	4.37	.80	.24	0.04	.63	.00	0.00
12	F0041820	123,400	334			HODGE	63.75	1.20	4.24	9.10	6.40	16.10	14.77	3.77	.118	.22	0.00	.26	.11	0.00
12	F0041820	123,400	334			HODGE	.00	.00	3.01	11.20	.00	.00	.00	.00	.00	.00	.00	.00	.00	0.00
53	F0041910	123,400	128			HYDRO	44.44	1.39	2.19	6.81	6.51	11.27	17.97	2.41	.29	.21	0.00	.24	.35	0.00
08	F0042620	123,400	2818			IOLEHILL HNS	74.01	1.76	5.51	12.57	4.35	17.14	19.62	4.94	.30	.44	0.20	.99	.64	0.00
08	F0045760	123,400	2356			KLANEAD 10 SSE	81.11	2.55	5.16	14.63	11.27	17.21	20.30	5.68	.265	.43	0.11	.11	.60	0.00
12	F0045870	123,400	2356			KLANEAD 10 SSE	71.97	3.10	4.44	12.09	11.47	13.75	18.34	5.15	1.25	.67	0.11	.01	.60	0.00
12	F0046020	123,400	15			ROBE	13.40	.53	.77	2.23	1.28	3.34	1.51	1.34	.21	.13	0.00	.90	.63	.74
23	F0048510	123,400	177			LAYTONVILLE	.00	3.20	2.90	8.40	.00	.00	.00	.00	.00	.20	0.20	.50	.10	0.10
47	F0048400	123,400	2725			LITTLE SHASTA	11.74	.40	.57	1.25	1.90	1.64	.40	1.55	.18	.95	0.20	.45	.00	0.00
53	F0052440	123,400	2725			MADE HIVER RANGER STA	64.70	2.46	3.72	16.21	7.70	16.01	17.67	4.47	.73	.27	0.04	.42	.00	0.00
12	F0057130	123,400	263			MIRABO 4 SE	.00	2.80	3.31	8.31	3.30	13.93	16.10	3.20	.00	.00	0.00	0.00	0.00	0.00
12	F0057130	123,400	263			MIRABO 4 SE	55.41	1.31	3.40	7.76	5.70	14.47	17.55	3.08	.88	.40	0.00	.30	.40	0.00
47	F0057330	123,400	250			MONTAGUE	10.09	.43	.74	.96	1.88	1.47	1.92	.61	.01	.65	0.37	.31	.34	0.00
47	F0057330	123,400	250			MONTAGUE 3 NE	.00	.40	.40	2.80	.00	2.70	1.10	1.00	.10	.91	0.20	.50	.50	0.00
47	F0057410	123,400	250			MONTAGUE 3 NE	13.44	.41	.51	1.47	1.70	2.66	2.35	.95	.11	.61	0.71	.66	.28	0.00
12	F0060900	123,400	19			MYERS FLAT	62.49	2.44	2.95	9.49	6.37	15.61	16.92	3.06	.63	.41	0.00	.31	.60	0.00
47	F0060900	123,400	19			MYERS FLAT	26.63	.50	3.01	11.20	6.40	4.41	6.74	3.84	1.28	.24	.36	0.21	.61	.62
12	F0060900	123,400	2225			OLD HAMMIS	.00	2.20	3.11	4.71	.70	.00	.00	.00	.00	.00	0.00	0.00	0.00	0.00
12	F0060900	123,400	2225			OLD HAMMIS	67.41	1.21	3.21	11.21	6.41	11.21	17.51	4.41	.81	.00	0.00	0.00	0.00	0.00
12	F0060900	123,400	2225			OLD HAMMIS	71.76	2.40	5.00	13.93	9.01	13.69	18.92	4.38	.180	.30	0.00	.88	.62	0.00
12	F0060900	123,400	2225			OLD HAMMIS	71.41	2.95	4.99	12.40	6.01	12.43	17.54	5.87	2.14	.20	0.21	.07	.62	0.00
12	F0060900	123,400	2225			OLD HAMMIS	60.01	1.52	3.											

TABLE A-2

STORAGE GAGE PRECIPITATION DATA

Table A-2 lists storage gages for which the seasonal accumulation of precipitation is reported. These gages are located in the remote mountain regions where no observers are available to operate conventional rain gages. Storage precipitation gages are tanks with capacity for storing an entire year's rainfall, along with antifreeze to melt frozen precipitation and oil to prevent evaporation losses. Once each year, in the summer or early fall, the precipitation that has accumulated since the last measurement is measured and then emptied out. With the addition of the proper amount of oil and antifreeze, the gage is ready to receive the next season's amount. Although logistics preclude conducting the measurement operation exactly at the end of the water year and exactly one year following the previous measurement, data from the gages fairly accurately depict the total precipitation for the water year.

TABLE A-2

STORAGE GAGE PRECIPITATION DATA  
NORTH COASTAL AREA  
(Measurements by the Department of Water Resources)

Station	Station Number	1974-75 Season	
		Measurement Period	Precipitation in Inches
NORTH COASTAL AREA			
<u>SMITH RIVER</u>			
Camp Six Lookout	1446	6-25-74 to 6-11-75	101.28
<u>LOST RIVER-BUTTE VALLEY</u>			
Bray 10 WSW	1050	No data. Gage removed by NWS.	
Crowder Flat	2188	6-19-74 to 6-12-75	19.66
Long Bell Station	5081-01	6-20-74 to 6-12-75	17.08
Medicine Lake	5505	8-29-74 to 8-28-75	43.25
<u>SHASTA-SCOTT VALLEYS</u>			
Gazelle Lookout	3363	6-27-74 to 6-12-75	20.09
<u>KLAMATH RIVER</u>			
Beswick 7S	0715	No data. Gage removed by NWS.	
Blue Creek Mountain	0899	6-24-74 to 6-9-75	121.97
<u>TRINITY RIVER</u>			
Board Camp Mountain	0929	6-25-74 to 6-10-75	No data <sup>1/</sup>
Mumbo Basin	6032	6-22-74 to 8-28-75	72.47
<u>EEL RIVER</u>			
Plaskett	6976	6-3-74 to 6-30-75	71.45

<sup>1/</sup> Vandalism.



## APPENDIX B

### SURFACE WATER MEASUREMENTS

This appendix presents surface water data for the 1975 water year, the period from October 1, 1974 to September 30, 1975. The data consist of summary tables of monthly and annual unimpaired runoff from four major north coastal streams and daily mean discharges at the Department's two north coastal area gaging stations (see Figure B-1).

In addition to data collected and published by the Department of Water Resources in this appendix, the U. S. Geological Survey collects and publishes data from many additional gaging stations for the same report area. This work is done under a federal-state cooperative contract, or through cooperative arrangements with other local or government agencies. Major exportations from the north coastal area, made through the U. S. Bureau of Reclamation's Judge Francis Carr Powerplant and the Pacific Gas and Electric Company's Potter Valley Powerhouse, are shown in the USGS report listed below. The data published in the following reports together with this report present a basis for a comprehensive analysis of the water resources for the area:

1. "Water Resources Data for California  
Part I. Surface Water Records  
Volume 1: Colorado River Basin, Southern Great  
Basin, and Pacific Slope Basins excluding  
Central Valley"  
United States Department of the Interior,  
Geological Survey  
Prepared in cooperation with the California  
Department of Water Resources and with other  
agencies.
2. Bulletin 120, "Water Conditions in California",  
Fall Issue, Department of Water Resources.
3. Bulletin 157, "Index of Stream Gaging Stations in  
and Adjacent to California, 1970". June 1971.  
Department of Water Resources.

TABLE B-1

ANNUAL UNIMPAIRED RUNOFF

Unimpaired runoff is defined as the flow that would occur naturally at a point in a stream if there were: (1) no upstream controls such as dams or reservoirs; (2) no artificial diversions or accretions; and (3) no change in ground water storage resulting from development.



TABLE B-1

## ANNUAL UNIMPAIRED RUNOFF

In Percent of Average

Water Year	Klamath River Copco to Orleans	Salmon River at Somesbar	Trinity River at Lewiston	Eel River at Scotia
Average Annual Runoff*	4,434	1,225	1,227	5,379
1925-26			66	61
1926-27			149	146
1927-28	86	89	86	86
1928-29	57	48	43	35
1929-30	-	63	66	65
1930-31	40	39	33	30
1931-32	76	85	59	67
1932-33	81	83	65	68
1933-34	49	47	56	46
1934-35	81	93	79	84
1935-36	90	93	83	107
1936-37	73	80	81	66
1937-38	179	182	171	200
1938-39	58	62	47	50
1939-40	102	104	131	136
1940-41	100	103	208	153
1941-42	104	108	147	138
1942-43	133	142	90	106
1943-44	62	52	53	42
1944-45	82	92	85	89
1945-46	117	124	115	112
1946-47	58	63	60	49
1947-48	96	101	98	88
1948-49	72	78	89	77
1949-50	92	96	70	77
1950-51	142	147	131	133
1951-52	149	159	148	149
1952-53	146	147	131	133
1953-54	138	131	129	129
1954-55	60	48	60	60
1955-56	186	179	165	190
1956-57	97	97	88	81
1957-58	184	184	219	217
1958-59	77	82	85	77
1959-60	78	77	84	87
1960-61	102	98	99	100
1961-62	74	78	85	73
1962-63	133	140	130	132
1963-64	90	92	85	64
1964-65	161	152	140	175
1965-66	101	91	110	96
1966-67	117	103	135	123
1967-68	76	77	82	79
1968-69	135	133	143	161
1969-70	143	130	130	139
1970-71	192	200	136	148
1971-72	142	148	94	87
1972-73	81	73	113	112
1973-74**	219	226	222	219
1974-75**	121	122	114	134

\* Average annual unimpaired runoff in thousands of acre-feet adjusted to the 50-year period October 1920 through September 1970.

\*\* Preliminary data subject to revision.



TABLE B-2  
MONTHLY UNIMPAIRED RUNOFF  
In Percent of Average

Month		Klamath River Copco to Orleans	Salmon River at Somesbar	Trinity River at Lewiston	Eel River at Scotia
October	Percent	53	53	2	16
1974	Average	86	21	21	55
November	Percent	39	30	32	8
1974	Average	215	55	51	284
December	Percent	44	34	39	31
1974	Average	487	128	99	939
January	Percent	56	59	41	43
1975	Average	655	165	110	1225
February	Percent	111	115	75	208
1975	Average	607	158	149	1176
March	Percent	196	187	173	358
1975	Average	588	158	157	795
April	Percent	117	107	77	111
1975	Average	627	179	217	550
May	Percent	176	162	164	141
1975	Average	587	192	241	239
June	Percent	206	214	217	121
1975	Average	335	108	123	79
July	Percent	176	217	180	132
1975	Average	125	35	36	22
August	Percent	134	164	101	134
1975	Average	67	15	13	10
September	Percent	92	150	100	0
1975	Average	56	10	9	7
1974-75	Percent	121	122	114	134
Water Year	Average	4,434	1,225	1,227	5,379

Note: The percent values are preliminary data subject to revision. Average annual unimpaired runoff in thousands of acre-feet adjusted to the 50-year period October 1920 through September 1970.

TABLE B-3

## DAILY MEAN DISCHARGE

A stream gaging station is named after the stream and the nearest post office. Each of the two gaging stations has been assigned an identification number, the letter and first digit of which denote the hydrographic unit; the remaining digits further identify the stations.

North Coastal Area

F0 - Smith River	F4 - Trinity River
F1 - Lost River-Butte Valley	F5 - Mad River
F2 - Shasta-Scott Valleys	F6 - Eel River
F3 - Klamath River	F7 - Mattole River

The discharges estimated for periods of no record or invalid record are shown with the letter "E". Also qualified by the letter "E" are discharges obtained from extended ratings which exceed 140 percent of the highest measured flow-rate on which the rating curve was based.

The discharge figures in this table have been rounded off as follows:

## 1. Daily flows - cubic feet per second

0.0	- 9.9	nearest Tenth
10	- 999	" Unit
1,000	- 9,999	" Ten
10,000	- 99,999	" Hundred
100,000	- 999,999	" Thousand

## 2. Monthly means - cubic feet per second

0.0	- 99.9	nearest Tenth
100	- 9,999	" Unit
10,000	- 99,999	" Ten
100,000	- 999,999	" Hundred

## 3. Yearly totals - acre-feet

0.0	- 9,999	nearest Unit
10,000	- 99,999	" Ten
100,000	- 999,999	" Hundred
1,000,000	- 9,999,999	" Thousand

**TABLE B-3**  
**DAILY MEAN DISCHARGE**  
(IN CUBIC FEET PER SECOND)

WATER YEAR	STATION NO.	STATION NAME
1975	F21300	LITTLE SHASTA RIVER NEAR MONTAGUE

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	DAY
1	5.3	5.3	5.1	6.0	7.5	52	30	52	107	26	13	8.8	1
2	5.3	4.9	5.6	6.0	7.5	43	28	55	106	25	13	8.7*	2
3	5.4	4.9	5.7	6.2	7.2	33	26	59	105	24	12	8.4	3
4	5.4	4.9	7.5	6.2	7.2	31	23	63	101	23	12	8.1	4
5	5.4	4.9	6.0	6.5	7.3	31	21	67	98	22	12	8.0	5
6	5.3	4.9	5.7*	6.7	7.6	33	19	71	93	21	12	8.0	6
7	5.3	5.7	5.8	7.2	12	42	19	77	88	20	12	8.0	7
8	5.3	5.4	5.4	7.2	19	77	20	81	83	20	11	7.8	8
9	5.4	5.2	5.4	7.0	57	48	22	88	79	19	11	7.8	9
10	5.2	5.4	5.0	7.1	28	35	23	92	74	19	11	7.7	10
11	5.2	5.2	7.6	6.7	20	28	22	98	70	18	11	7.8	11
12	5.2	5.1	8.8	6.3	27	23	30	103	67	19	10	7.9	12
13	5.2	4.9	7.0	7.9	42	22	41	110	64	19	10	11	13
14	5.1	4.9	12	8.0	27	21*	40	114	61	18	9.9	12	14
15	5.1	4.9	23	7.8	18	21	35*	122*	59	21	9.7	8.3	15
16	5.0	4.9	13	7.5	15	18	32	127	55	20	9.4	7.8	16
17	4.9	5.2	9.0	7.2	12	15	29	125	52	18	10	7.7	17
18	4.9	6.5	6.7	7.0	13	69	29	124	49	17	12	7.6	18
19	4.9	4.9*	6.6	6.7	14	78	56	120	45	17	10	7.5	19
20	5.0	4.9	9.2	6.7	14	41	50	106	43	17	9.7	7.4	20
21	5.0	5.2	8.3	7.0	9.6	26	55	101	40	16	9.4	7.4	21
22	5.1	5.3	5.9	7.2	10	22	56	99	36	16	9.2	7.3	22
23	5.1	5.2	6.0	7.5	11	22	52	104	33	15	9.2	7.3	23
24	5.0	5.2	6.0	7.8	15	27	62	101	37	15*	8.7	7.2*	24
25	5.0	5.5	6.0	8.0	21	53	52	96	38	15	8.4	7.2	25
26	5.1	5.3	5.9	8.5	25	31	42	95	34*	14	8.3*	7.1	26
27	5.2	5.3	6.0	8.8	43	24	38	99	31	14	8.4	7.0	27
28	6.0	5.3	6.2	8.3	57	21	40	100*	29	14	10	7.0	28
29	5.6	4.8	6.5	8.0	27	44	102	102	28	14	8.9	7.1	29
30	5.3	5.0	6.5	7.8	41	48	104	106	27	14	8.9	7.0	30
31	5.9		6.5	7.8	38		106	106		13		8.8	31
MEAN	5.2	5.2	7.4	7.2	19.8	35.3	36.1	95.5	61.1	18.2	10.3	7.9	MEAN
MAX	6.0	6.5	23.0	8.8	57.0	78.0	62.0	127	107	26.0	13.0	12.0	MAX
MIN	4.9	4.8	5.0	6.0	7.2	15.0	19.0	52.0	27.0	13.0	8.3	7.0	MIN
AC FT	322	307	456	445	1099	2168	2150	5873	3634	1117	633	472	AC FT

**WATER YEAR SUMMARY**

E - ESTIMATED  
NR - NO RECORD  
\* - DISCHARGE MEASUREMENT OR  
OBSERVATION OF NO FLOW  
# - E AND \*

MEAN DISCHARGE	DISCHARGE	DAGE HT	MO	DAY	TIME	DISCHARGE	DAGE HT	MO	DAY	TIME	TOTAL ACRES FEET
25.8	162	2.77	03	18	1745	3.2	0.58	12	10	1430	18675

LOCATION			MAXIMUM DISCHARGE			PERIOD OF RECORD			DATUM OF GAGE		
LATITUDE	LONGITUDE	14 SEC T & R NO B & M	OF RECORD			DISCHARGE	GAGE HEIGHT ONLY	PERIOD	ZERO ON GAGE	887 DATUM	
			CF3	GAGE HT	DATE			FROM	TO		
41 45 11	122 17 11	NM15 45N 4W	5910 E	10.4	12/22 04	21-NOV 51 B APR 52-APR 55 SEP 56-DATE	21-NOV 51 B APR 52-APR 55 SEP 56-DATE	1951	1954	NO	LOCAL
Station located S of Bell Mountain Road, 12 mi. NE of Montague, 16 mi. SW of Macdoel. Stage-discharge relationship affected at times. Drainage area is 48.2 sq. mi.											
B - Irrigation season only.											



**TABLE B-3 (CONT.)**  
**DAILY MEAN DISCHARGE**  
(IN CUBIC FEET PER SECOND)

WATER YEAR	STATION NO	STATION NAME
1975	742100	TRINITY RIVER NORTH FORK NEAR HELENA

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	DAY
1	27	35*	42	99	239	1,670	1,350	976	1,380	241	87	49	1
2	28	33	80	91	223	2,060	1,170	1,070	1,230	236	82	46	2
3	28	33	236	98	209	1,670	1,060	1,190	1,080	231	85	46	3
4	28	32	340	237	214	1,300	940	1,040	1,040	251	85	42	4
5	27	32	158*	536	221	1,070	857	864	1,140	266	83	40	5
6	27	31	116	847	228	941	763	797	1,010	256	76	38	6
7	27	48	98	883*	293	1,110	708	822	916	259	72	37	7
8	27	55	89	1,680	517	1,630	658	1,000	787	279	69	36	8
9	27	40	79	887	1,490	1,380	633	1,230	720	277	68	36	9
10	27	45	71	684	1,250	1,110	676	1,310	733	284	68	36	10
11	27	40	124	600	910	916	737	1,290	740	302	68	36*	11
12	27	36	278	492	1,290	801	834	1,250	750	301	68	35	12
13	27	35	286	423	1,700	721	1,010	1,460*	772	273	67	34	13
14	28	34	318	382	1,400*	645	1,090*	1,960*	794	249	66	37	14
15	28	34	417	359	991	619	933	1,890	773	237	63	36	15
16	27	33	289	342	769	586	805	1,540	648	247	61	35	16
17	27	35	213	341	635	601	713	1,490	511	205	62	34	17
18	27	80	167	371	566	1,320	672	1,610	417	192	89	33	18
19	27	55	139	393	1,130	2,070	712	1,570	380	190	78	32	19
20	27	46	136	418	1,460	1,510	805	1,200	356	194	69	32	20
21	27	77	151	404	1,010	1,250	847	985	371	194	63	31	21
22	27	106	133	396	784	1,060	874	931	362	183	60	30	22
23	27	62	118	387	684	976	867	1,070	340*	165*	57	30	23
24	27	54	106	422	702	1,170	1,360	1,180	306	160	58	29	24
25	28	68	96	457	806	2,550	1,420	1,070	263	145	56	29	25
26	28	60	95	432	835	1,840	1,080	1,050	242	130	54	28	26
27	28	54	134	361	1,010	1,420	914	1,150*	247	132	54	28	27
28	28	50	115	317	1,530	1,220	862	1,160	250	134	62*	28	28
29	30	46	100	278		1,130	860	1,250	251	130	60	28	29
30	37	44	107	247		1,330	919	1,360	246	114	55	28	30
31	36		92	246		1,550		1,460		97	52		31
MEAN	30.2	47.8	158	455	827	1,265	904	1,233	635	211	67.6	34.6	MEAN
MAX	71.0	106	417	1,680	1,770	2,550	1,420	1,960	1,360	302	89.0	49.0	MAX
MIN	27.0	31.0	42.0	91.0	209	586	633	797	242	97.0	52.0	28.0	MIN
AC FT	1857	2842	9765	27987	45953	77804	53810	75818	37795	13000	4159	2057	AC FT

**WATER YEAR SUMMARY**

MEAN	MAXIMUM					MINIMUM					TOTAL
DISCHARGE	DISCHARGE	GAGE HT	MO	DAY	TIME	DISCHARGE	GAGE HT	MO	DAY	TIME	ACRE FEET
487.4	2850	11.57	03	25	0515	27.0	4.85	10	1	0000	352845

E - ESTIMATED  
NR - NO RECORD  
\* - DISCHARGE MEASUREMENT OR  
OBSERVATION OF NO FLOW  
# - FLOOD \*

LOCATION			MAXIMUM DISCHARGE			PERIOD OF RECORD			DATUM OF GAGE		
LATITUDE	LONGITUDE	14 SEC T & R M D B & M	OF RECORD			DISCHARGE	GAGE HEIGHT ONLY	PERIOD	FROM	TO	ZERO ON GAGE
			CFS	GAGE HT	DATE						RFF DATUM
36° 15' N	103° 15' W	42° 15' N	1,680	11.57	03/25/05	2,550	4.85	10/1/00	10/1/00	0	0





## APPENDIX C

### GROUND WATER MEASUREMENTS

This appendix contains ground water level measurements from 61 wells for the period October 1, 1974 through September 30, 1975. It also contains a table which summarizes the measurements. Wells in the network are continuously reviewed and, when conditions dictate, replacement wells are located and measured.

There are nine ground water basins in the North Coast Region for which data are reported.

Two numbering systems are used by the Department to facilitate the processing of water level measurement data. The two systems are the Region and Basin Designation and the State Well Numbering System as described below.

The regions are those of the California Regional Water Quality Control Boards whose geographic areas are defined in Section 13200 of the Water Code. That portion of Northern California covered by this report is included in the North Coast Region. A decimal system of the form 0-00.00 has been selected according to geographic regions, ground water basins, and subbasins or subareas as follows:

	1	-	01	00
Region (North Coast Region)	_____			
Ground Water Basin (Smith River Basin)	_____			
Subbasin or Subarea (Subbasins or subareas have not been defined in the North Coast Region)	_____			

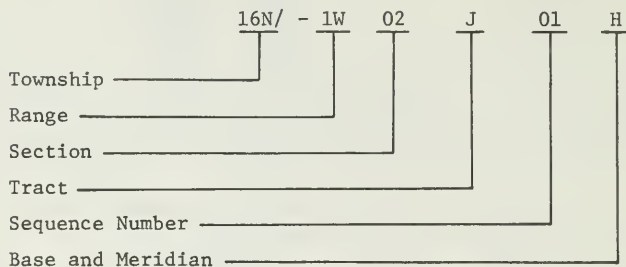
The State Well Numbering System is based on township, range, and section subdivisions of the Public Land Survey.

A section is divided into 40-acre tracts as follows:

D	C	B	A
E	F	G	H
M	L	K	J
N	P	Q	R

Sequence numbers in a tract are generally assigned in chronological order.

The number of a well, assigned in accordance with this system, is referred to as the State Well Number, as illustrated below:



This number identifies and locates the well. In the example, the well is in Township 16 North, Range 1 West, Tract J of Section 2, located in the Humboldt Base and Meridian.

TABLE C-1

AVERAGE CHANGE OF GROUND WATER LEVELS  
AND SUMMARY OF WELL MEASUREMENTS REPORTED  
NORTH COASTAL AREA

:	:	Average	:	:	:
:	:	Change	:	:	Number of
:	<u>Ground Water Basin</u>	Spring 1974	Measuring	<u>Wells Reported</u>	:
:	:	to	Agency	:	:
:	:	Spring 1975	:	Fall	Spring
:	Name	in feet	:	1974	1975
:	Number	:	:	:	:
:	:	:	:	:	:

## NORTH COASTAL REGION

Smith River Plain	1-01.00	-0.9	DWR	8	8
Butte Valley	1-03.00	+1.8	DWR	15	13
Shasta Valley	1-04.00	-0.2	DWR	9	8
Scott River Valley	1-05.00	-0.7	DWR	5	5
Mad River Valley	1-08.00	-0.9	DWR	2	3
Eel River Valley	1-10.00	-1.5	DWR	7	6
Round Valley	1-11.00	-0.9	DWR	4	7
Laytonville Valley	1-12.00	-0.4	DWR	3	4
Little Lake Valley	1-13.00	-1.4	DWR	5	5

DWR - Department of Water Resources

## TABLE C-2

### GROUND WATER LEVELS AT WELLS

An explanation of the column headings and the code symbols follows:

State Well Number - Refer to the explanation presented on page 17.

Ground Surface Elevation - The numbers in this column are the elevation in feet above mean sea level (USGS datum) of the ground surface at the well. Elevations are usually taken from topographic maps and the accuracy is controlled by topographic standards.

Date - The date shown in the column is the date when the depth measurement given in the next column was made.

Ground Surface to Water Surface - This is the measured depth in feet from the ground surface to the water surface in the well; some of the depth measurements in the column may be preceded by a number in parentheses to indicate a questionable measurement. The code applicable to these "questionable measurements" is as follows:

- |                                      |                           |
|--------------------------------------|---------------------------|
| (1) Pumping                          | (6) Other                 |
| (2) Nearby pump operating            | (7) Recharge operation at |
| (3) Casing leaking or wet            | or near well              |
| (4) Pumped recently                  | (8) Oil in casing         |
| (5) Air or pressure gage measurement | (9) Caved or deepened     |

When a measurement was attempted, but could not be obtained, then only a number in parentheses is shown in the column. The code applicable to these "no measurements" is as follows:

- |                               |                               |
|-------------------------------|-------------------------------|
| (1) Pumping                   | (6) Well has been destroyed   |
| (2) Pump house locked         | (7) Special                   |
| (3) Tape hung up              | (8) Casing leaking or wet     |
| (4) Cannot get tape in casing | (9) Temporarily inaccessible  |
| (5) Unable to locate well     | (0) Measurements discontinued |

The words FLOW and DRY are shown in this column to indicate a flowing or dry well, respectively. A minus sign preceding the number in this column indicates that the static water level in the well is this distance in feet above the ground surface.

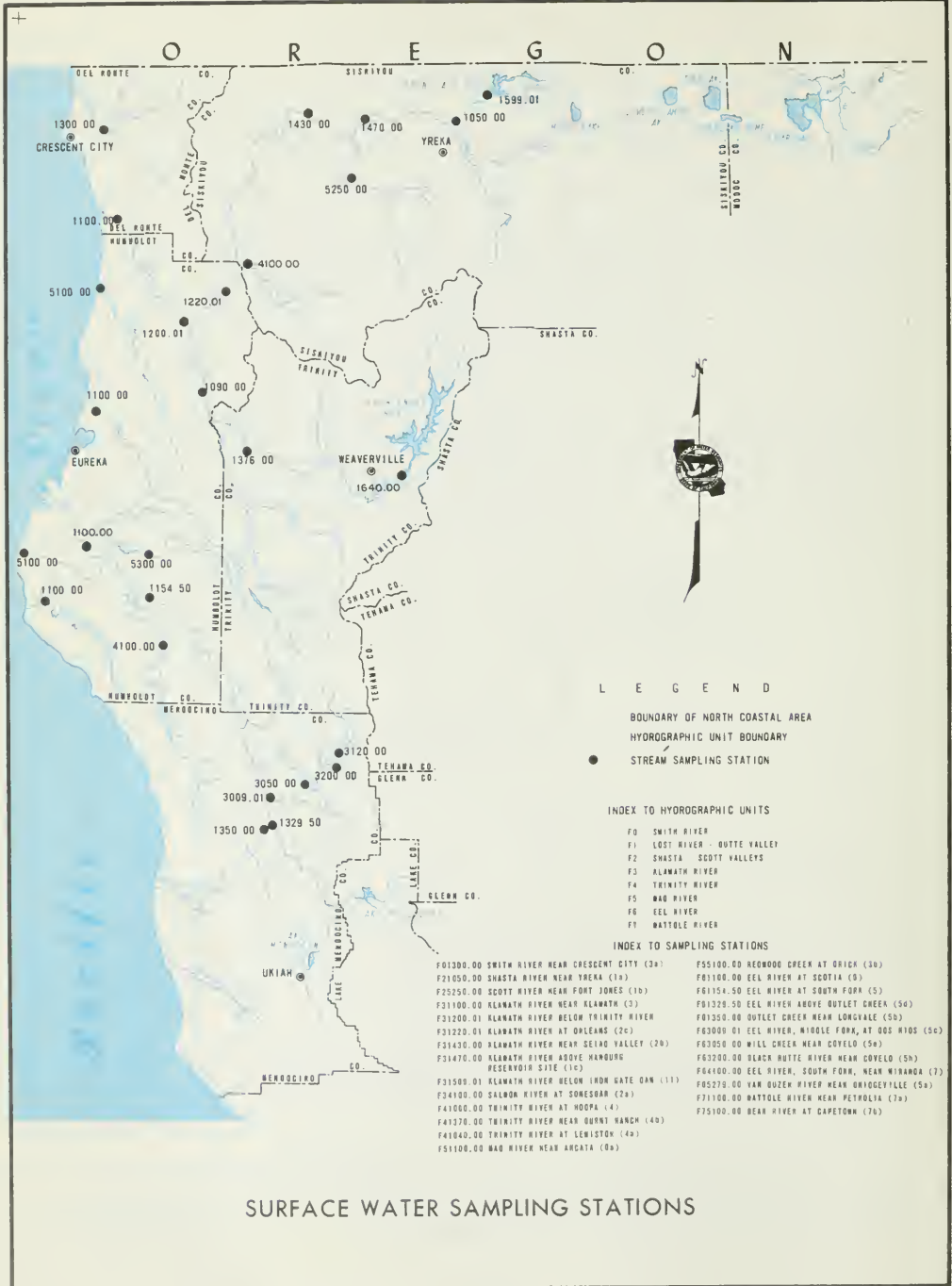
Water Surface Elevation - This is the elevation in feet above mean sea level (USGS datum) of the water surface in the well. It was derived by subtraction of the depth measurement from the ground surface elevation.

Agency Supplying Data - Each of these numbers is the code number for the agency supplying data for that measurement. The Department of Water Resources is the sole agency supplying ground water level measurement data for this report. It has been assigned an agency code number of 5050.

TABLE C-2  
GROUND WATER LEVELS AT WELLS

NORTH COASTAL AREA

STATE WELL NUMBER	GROUND SURFACE ELEVATION IN FEET	DATE	GROUND SURFACE TO WATER SURFACE ELEVATION IN FEET	WATER SURFACE ELEVATION IN FEET	AGENCY SUPPLYING DATA	STATE WELL NUMBER	GROUND SURFACE ELEVATION IN FEET	DATE	GROUND SURFACE TO WATER SURFACE ELEVATION IN FEET	WATER SURFACE ELEVATION IN FEET	AGENCY SUPPLYING DATA
SMITH RIVER PLAIN 1-01.00						SCOTT RIVER VALLEY 1-05.00					
16H/01W-02J01H	127.0	11-10-74 4-28-75	26.0 17.2	99.0 109.8	5050 5050	42H/09W-02A02H	2746.0	10-15-74 4-18-75	10.4 4.8	2735.6 2741.2	5050 5050
16H/01W-17E01H	48.0	11-10-74 4-28-75	22.6 12.2	25.4 35.8	5050 5050	42H/09W-27H01H	2930.0	10-15-74 4-18-75	8.6 2.9	2921.6 2927.1	5050 5050
17H/01W-02P01H	31.0	11-10-74 4-28-75	21.0 16.8	10.0 14.2	5050 5050	43H/09W-23F01H	2728.0	10-15-74 4-18-75	5.8 3.0	2722.2 2725.0	5050 5050
17H/01W-03E01H	14.0	11-10-74 4-28-75	13.1 9.8	0.9 4.2	5050 5050	43H/09W-24F01H	2735.0	10-15-74 4-18-75	5.5 3.5	2729.5 2731.5	5050 5050
17H/01W-15M02H	21.0	11-10-74 4-28-75	16.6 9.0	4.4 12.0	5050 5050	44H/09W-28F01H	2711.0	10-15-74 4-18-75	14.6 3.5	2696.4 2707.5	5050 5050
17H/01W-20O01H	15.0	11-10-74 4-28-75	6.0 1.9	9.0 13.1	5050 5050	MAD RIVER VALLEY 1-08.00					
17H/01W-27O05H	40.0	11-10-74 4-28-75	20.5 11.5	19.5 28.5	5050 5050	04H/01E-07H01H	11.0	11-11-74 4-29-75	9.5 3.4	1.5 7.6	5050 5050
18H/01W-27F03H	15.0	11-10-74 4-28-75	8.3 5.3	6.7 9.7	5050 5050	06H/01E-17O01H	23.0	11-11-74 4-29-75	13.8 6.7	9.2 16.3	5050 5050
BUTTE VALLEY 1-03.00						06H/01E-19O01H	10.5	11-11-74 (0)	10.5 (0)	8.5 (0)	5050 5050
45H/01W-01E01H	4388.0	11-06-74 4-17-75	161.7 161.3	4226.3 4226.7	5050 5050	EEL RIVER VALLEY 1-10.00					
45H/01W-06A01H	4258.0	11-06-74 4-17-75	27.5 24.8	4230.5 4233.2	5050 5050	02H/01W-08B01H	34.0	11-11-74 4-29-75	22.7 13.5	11.3 20.5	5050 5050
45H/01W-11P01H	4275.0	11-06-74 4-17-75	40.0 36.5	4235.0 4238.5	5050 5050	03H/01W-18O01H	15.0	11-11-74 4-29-75	5.2 3.3	9.8 11.7	5050 5050
46H/01W-06N01H	4242.0	11-06-74 4-17-75	23.2 17.5	4216.6 4224.5	5050 5050	03H/01W-30N01H	19.0	11-11-74 4-29-75	17.0 12.5	2.0 6.5	5050 5050
46H/01W-17B01H	4246.0	11-06-74 4-17-75	38.6 29.8	4207.4 4216.2	5050 5050	03H/01W-34J01H	53.0	11-11-74 4-29-75	35.4 31.2	17.6 21.8	5050 5050
46H/01W-18Q01H	4247.0	11-06-74 4-17-75	23.2 14.7	4223.6 4231.3	5050 5050	03H/02W-13J01H	10.0	11-11-74 4-29-75	7.1 4.3	2.9 5.7	5050 5050
46H/02W-03R02H	4256.0	11-06-74 4-17-75	25.5 21.0	4230.5 4233.0	5050 5050	03H/02W-26R01H	12.0	11-11-74 4-29-75	10.4 (0)	1.6 (0)	5050 5050
46H/02W-26Q01H	4254.0	11-06-74 4-17-75	14.8 11.2	4239.2 4242.8	5050 5050	03H/02W-35K02H	13.0	11-11-74 4-29-75	10.4 7.0	2.6 6.0	5050 5050
47H/01E-06A02H	4244.5	11-06-74 4-17-75	32.3 29.3	4212.2 4215.2	5050 5050	ROUND VALLEY 1-11.00					
47H/01E-20D01H	4240.0	11-06-74 4-17-75	24.2 21.8	4215.8 4218.2	5050 5050	22H/12W-04B01H	1351.0	11-11-74 4-24-75	16.5 6.6	1334.5 1344.4	5050 5050
47H/01W-04Q01H	4241.5	11-06-74 4-17-75	6.8 (9)	4234.7 (9)	5050 5050	22H/12W-06E02H	1395.0	4-24-75	2.9	1392.1	5050
47H/01W-04D02H	4241.5	11-06-74 4-17-75	7.3 (9)	4234.2 (9)	5050 5050	22H/12W-08L01H	1370.0	11-11-74 4-24-75	4.5 -10.0	1365.5 1380.0	5050 5050
47H/01W-19L01H	4238.0	11-06-74 4-17-75	4.7 1.6	4233.3 4236.4	5050 5050	22H/13W-01N01H	1420.0	4-24-75	5.0	1415.0	5050
47H/01W-27B01H	4233.0	11-06-74 4-17-75	8.0 4.6	4225.0 4228.2	5050 5050	22H/13W-12R01H	1400.0	11-11-74 4-24-75	30.1 6.0	1369.9 1394.0	5050 5050
47H/01W-34Q01H	4237.0	11-06-74 4-17-75	19.0 15.8	4218.0 4221.2	5050 5050	23H/12W-28N03H	1374.0	4-24-75	6.0	1368.0	5050
SHASTA VALLEY 1-04.00						23H/13W-36C03H	1410.0	11-11-74 4-24-75	28.7 6.9	1381.3 1401.1	5050 5050
42H/03W-20J01H	2882.0	10-15-74	6.6 6.1	2875.4 2875.9	5050 5050	LATTORVILLE VALLEY 1-12.00					
42H/04W-10J01H	2815.0	10-15-74	9.8 3.0	2825.2 2832.0	5050 5050	21H/13W-30H01H	1688.0	11-11-74 4-24-75	17.3 4.9	1670.7 1683.1	5050 5050
43H/05W-11A01H	2740.0	11-07-74	126.0 125.4	2614.0 2614.6	5050 5050	21H/13W-01L02H	1682.0	11-11-74 4-24-75	(2) 4.8	(2) 1675.1	5050 5050
43H/06W-15F03H	2663.0	10-15-74	13.3 6.7	2649.7 2656.3	5050 5050	21H/13W-12B02H	1630.0	11-11-74 4-24-75	17.5 3.7	1612.5 1630.3	5050 5050
43H/06W-22A01H	2665.0	11-07-74	17.0 6.6	2648.0 2658.4	5050 5050	21H/13W-24A01H	1653.0	11-11-74 4-24-75	13.5 0.0	1639.5 1653.0	5050 5050
43H/06W-33C01H	2610.0	10-15-74	45.0 42.8	2765.0 2767.2	5050 5050	LITTLE LAKE VALLEY 1-13.00					
44H/05W-34B01H	2637.0	10-15-74	26.5 27.1	2610.5 2609.9	5050 5050	18H/13W-08L01H	1340.0	11-11-74 4-24-75	9.2 0.5	1330.8 1339.5	5050 5050
44H/06W-10F01H	2537.0	10-15-74	13.6 26.8	2523.4 2510.2	5050 5050	18H/13W-17J01H	1370.0	11-11-74 4-24-75	29.0 14.7	1341.0 1355.1	5050 5050
44H/06W-19E01H	2538.0	10-15-74	21.5 21.5	2516.5 2516.5	5050 5050	18H/13W-18E01H	1365.0	11-11-74 4-24-75	28.4 16.5	1346.6 1348.5	5050 5050
						19H/13W-32F01H	1347.0	11-11-74 4-24-75	13.9 8.4	1333.1 1340.4	5050 5050
						19H/13W-32L02H	1350.0	11-11-74 4-24-75	12.5 6.5	1337.5 1341.5	5050 5050



## APPENDIX D

### SURFACE WATER QUALITY

This appendix presents surface water quality data collected during the period from October 1, 1974, through September 30, 1975. The data were collected from 25 stream stations in the north coastal area.

At the time of field sampling, dissolved oxygen, pH, and temperature measurements are made and gage height and time are noted. Comments on local conditions are noted in field books which are available in the files of the Department of Water Resources. The mineral constituents were determined in accordance with methods described in "Standard Methods for the Examination of Water and Waste Water", prepared and published jointly by the American Public Health Association, American Water Works Association, and Water Pollution Control Federation, 13th Edition, 1971.

Each station in this appendix has been assigned a station number. The numbering system is described in Appendix B, "Surface Water Measurements".





TABLE D-1  
SAMPLING STATION DATA AND INDEX  
North Coastal Area

Station	Station Number	Location*	Beginning of Record	Frequency of Sampling	Analyses on Page
BEAR RIVER AT CAPETOWN	F75100.00	01N/03W-13 H	MAY 1964	Annually	35
BLACK BUTTE RIVER NEAR COVELO	F63200.00	23N/11W-28 M	NOV. 1964	Monthly	34, 37, 43
EEL RIVER ABOVE OUTLET CREEK NEAR DOS RIOS	F61329.50	21N/13W-32 M	APR. 1958	Monthly	32, 33, 37, 43
EEL RIVER AT SCOTIA	F61100.00	01N/01E-05 H	APR. 1951	Monthly	31, 32, 37, 41, 45
EEL RIVER AT SOUTH FORK	F61154.50	01S/02E-26 H	APR. 1951	Monthly	36, 37, 41
EEL RIVER, MIDDLE FORK, AT DOS RIOS	F63009.01	21N/13W-06 M	APR. 1958	Monthly	33, 34, 37, 43
EEL RIVER, SOUTH FORK, NEAR MIRANDA	F64100.00	03S/04E-30 H	APR. 1951	Monthly	34, 35, 37, 43
KLAMATH RIVER ABOVE HAMBURG RESERVOIR SITE	F31470.00	46N/10W-14 M	DEC. 1958	Bimonthly	29
KLAMATH RIVER AT ORLEANS	F31220.01	11N/06E-31 H	JAN. 1964	Monthly	28, 37, 41
KLAMATH RIVER BELOW IRON GATE DAM	F31599.01	47N/05W-20 M	DEC. 1961	Monthly	29, 37, 41, 45
KLAMATH RIVER NEAR KIAMATH	F31100.00	13N/02E-19 H	APR. 1951	Monthly	27, 28, 37, 41, 45
KLAMATH RIVER NEAR SELAD VALLEY	F31430.00	46N/12W-03 M	DEC. 1958	Monthly	28, 29, 37, 41
MAD RIVER NEAR ARCATA	F51100.00	06N/01E-15 H	NOV. 1958	Bimonthly	31, 37, 41
MATTOLE RIVER NEAR PETROLIA	F71100.00	02S/02W-11 H	JAN. 1959	Annually	35
MILL CREEK NEAR COVELO	F63050.00	22N/12W-22 M	FEB. 1965	Monthly	34, 37, 43
OUTLET CREEK NEAR LONGVALE	F61350.00	20N/14W-01 M	MAY 1958	Monthly	33, 37, 43
REDWOOD CREEK AT ORICK	F55100.00	10N/01E-04 H	NOV. 1958	Monthly	31, 37, 41
SALMON RIVER AT SOMESBAR	F34100.00	11N/06E-03 H	NOV. 1958	Semiannually	3
SCOTT RIVER NEAR FORT JONES	F25250.00	44N/10W-28 M	DEC. 1958	Bimonthly	27, 37, 41, 45
SHASTA RIVER NEAR YREKA	F21050.00	46N/07W-24 M	DEC. 1958	Bimonthly	27, 37, 41, 45
SMITH RIVER NEAR CRESCENT CITY	F61300.00	16N/01E-10 H	APR. 1951	Monthly	27, 37, 41, 45
TRINITY RIVER AT HOOPA	F41080.00	08N/04E-25 H	APR. 1951	Monthly	30, 37, 41, 45
TRINITY RIVER AT LEWISTON	F41640.00	33N/08W-17 M	APR. 1951	Bimonthly	30, 31, 37, 41
TRINITY RIVER NEAR BURNT RANCH	F41376.00	05N/07E-19 H	APR. 1958	Bimonthly	31, 37, 41, 45
VAN DUZEN RIVER NEAR BRIDGEVILLE	F65270.00	01N/02E-12 H	APR. 1958	Monthly	35, 39, 43, 45

\* N = North, S = South, E = East, W = West  
H = Horizontal Distance Base, M = Miles

# TABLE D-2

## MINERAL ANALYSES OF SURFACE WATER

### Lab and Sampler Agency Code

5050 - Department of Water Resources

### Abbreviations

<u>TIME</u>	- Pacific Standard Time on a 24-hour clock
<u>G.H.</u>	- Instantaneous gage height in feet above an established datum
<u>Q</u>	- Instantaneous discharge measured in cubic feet per second (cfs). "E" indicates the value has been estimated.
<u>DEPTH</u>	- Depth at which sample was collected
<u>DO</u>	- Dissolved oxygen content in milligrams per liter
<u>SAT</u>	- Percent of normal dissolved oxygen saturation
<u>TEMP</u>	- Water temperature in degrees Fahrenheit (F) and Celsius (C)
<u>PH</u>	- Measure of acidity or alkalinity of water
<u>EC</u>	- Electrical conductance in micromhos at 25° C.
<u>TDS</u>	- Gravimetric determination of total dissolved solids at 180° C.
<u>SUM</u>	- Total dissolved solids by summation of analyzed constituents
<u>TH</u>	- Total hardness
<u>NCH</u>	- Noncarbonate hardness - any excess of total hardness over total alkalinity
<u>TURB</u>	- Jackson Turbidity Units measured with a Hellige Turbidimeter (E) or a Hach Nephelometer (A). Field determination (F).
<u>SAR</u>	- Sodium adsorption ratio
<u>PERCENT REACTANCE VALUE</u>	- Determined by dividing the sum of the cations or anions in milliequivalents per liter into each constituent in milliequivalents per liter arriving at a percentage. For a partial analysis, an approximate value is determined by multiplying the electrical conductance by 0.01 and using that as the cation or anion sum.

### Mineral Constituents

B	- Boron	K	- Potassium
CA	- Calcium	MG	- Magnesium
CL	- Chloride	NA	- Sodium
CO <sub>3</sub>	- Carbonate	NO <sub>3</sub>	- Nitrate
F	- Fluoride	SI0 <sub>2</sub>	- Silica
HCO <sub>3</sub>	- Bicarbonate	S0 <sub>4</sub>	- Sulfate

TABLE D-2  
MINERAL ANALYSES OF SURFACE WATER

DATE TIME	SAMPLER LAB	G.P. C	DD SAT	TEMP	FIELD LABORATORY PH EC	MINERAL CONSTITUENTS IN								MILLIGRAMS PER LITER MILLIEQUIVALENTS PER LITER PERCENT REACTANCE VALUE				MILLIGRAMS PER LITER					
						CA	MG	NA	K	CO3	HCO3	SO4	CL	NO3									
F1 1300.00 SMITH RIVER NEAR CRESCENT CITY																							
10/02/74 0850	S-50N		205	9.7 9.4	57.2F 14.0C	7.8	159	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1AF
11/13/74 0915	S-50N		27	11.4 10.1	50.0F 1.0C	7.6	146	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0AF
12/03/74 0820	S-50N		22+0	10.9 9.4	46.2F 9.0C	7.8	118	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	3AF
01/07/75 0745	S-50		11600	11.7 9.9	46.4F 0.0C	7.3	77	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	13AF
02/19/75 0810	S-50N		19200	12.6 10.9	46.2F 1.0C	7.4	70 72	--	--	2.0 0.09 12	--	0 0.00	39 0.04	--	1.3 0.6*	--	20	--	--	--	--	--	33 17A 0.2
03/11/75 0720	S-50N		5600	11.9 9.7	43.7F 0.5C	7.4	81	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	2AF
04/15/75 0700	S-50N		3400	12.61 9.4	42.8F 0.0C	7.7	86	--	--	1.5 0.07 8	--	0 0.00	50 0.02	--	1.5 0.04	--	0.00	--	--	--	--	--	39 1A 0.1
05/13/75 0720	S-50N		4300	10.9 9.7	5.0F 1.0C	7.4	78	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1AF
08/10/75 0620	S-50		11400	9.3 9.4	61.8F 16.0C	7.4	107	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1AF
07/07/75 1700	S-50N		670	9.5 10.2	66.2F 15.0C	8.1	126	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0AF
08/11/75 1615	S-50N		312	9.2 10.3	64.8F 21.0C	8.2	146	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0AF
09/02/75 1615	S-50N S-50N		7.8J 300	10.1 10.5	64.4F 16.0C	8.11 8.2	144 144	--	--	2.6 1.1 7	--	0 0.00	80 1.31	--	2.5 0.07	--	0.00	--	--	--	--	--	70 0A 0.1
F2 1650.00 SHASTA RIVER NEAR YDEKA																							
11/08/74 0740	S-50N		3.21 200	11.4 10.3	46.4F 8.0C	8.2	507	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	3AF
01/15/75 0945	S-50N S-50N		3.57 222	11.9 9.7	34.2F 4.0C	8.2 8.4	509 570	--	--	4.2 1.83 27	--	7.0 0.23	314 5.15	--	24 0.08	--	0.00	--	--	--	--	--	751 1A 1.2
03/18/75 1250	S-50N S-50F		6.32 1800	10.5 9	42.0F 0.0C	8.2 7.8	335 302	21 1.05 27	22 1.01 46	3.5 1.00 25	0 0.04 2	198 3.25 04	14 0.29 7	8.7 0.25 6	5.7 0.09 2	0.30	--	--	--	--	--	213 142 100A 190 0 0.0	
05/05/75 1220	S-50N S-50N		3.02 200	10.2 10.1	53.0F 12.0C	8.2 8.3	517	--	--	3.2 1.39 22	--	0 0.00	310 5.08	--	17 0.00	--	0.40	--	--	--	--	--	248 1A 0.9
07/17/75 1520	S-50N		3.19 112	7.3 9.4	78.8F 26.0C	8.2	538	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	3AF
09/18/75 1030	S-50N		3.60 0.3	9.4 10.1	64.4F 16.0C	8.4	605	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	2AF
F2 5250.00 SCOTT RIVER NEAR FORT JONES																							
11/08/74 1100	S-50N		5.35 164	12.7 11.7	46.4F 8.0C	7.8	192	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	2AF
01/15/75 1245	S-50N		6.02 338	11.4 9.4	41.0F 5.0C	7.4	211	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	3AF
05/05/75 1035	S-50N S-50N		7.03 1300	10.4 9.9	51.8F 11.0C	7.6 8.2	176	--	--	2.6 1.1 6	--	0 0.00	105 1.72	--	1.1 0.03	--	0.00	--	--	--	--	--	80 7A 0.1
07/17/75 1025	S-50N		6.27 433	4.1 11.7	71.6F 22.0C	8.0	201	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	3AF
09/17/75 1535	S-50N		5.36 86	11.6 10.1	64.0F 21.0C	8.4	310	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1AF
F3 1100.00 KLAMATH RIVER NEAR KLAMATH																							
10/02/74 0830	S-50N		4850	8.7 9.4	60.0F 16.0C	8.1	224	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1AF
11/13/74 1000	S-50N		5126	10.1 9	51.9F 1.5C	7.6	212	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	4AF
12/02/74 1530	S-50N		5500	10.7 9	46.4F 0.0C	8.1	208	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0AF

TABLE D-2 CONT  
MINERAL ANALYSES OF SURFACE WATER

DATE TIME	SAMPLE L-R	G.M. U	DO SAT	TEMP	FIELD LABORATORY PH EC	MINERAL CONSTITUENTS IN				MILLIGRAMS PER LITER MILLIEQUIVALENTS PER LITER					MILLIGRAMS PER LITER				
						CA	MG	NA	K	PERCENT REACTANCE VALUE					8	F	TDS SUM	TH NCH	TURB SAR
										CO3	HCO3	SO4	CL	NO3					
F3		1100.03	KLAMATH RIVER NEAR KLAMATH										CONTINUED						
01/07/75 0940	S-50	31000	11.5 97	46.4F 4.0C	7.5	119	--	--	--	--	--	--	--	--	--	--	--	--	66AF
02/18/75 1655	S-50	27000	10.1 85	47.3F 8.5C	7.4	108	--	--	--	--	--	--	--	--	--	--	--	--	27AF
03/10/75 1505	S-50	42200	11.2 97	46.2F 4.0C	7.5	140	--	--	--	--	--	--	--	--	--	--	--	--	75AF
04/14/75 1435	S-50 S-50	27200	10.9 95	50.0F 10.0C	7.6 8.1	150	--	--	5.0 .22 14	-- 0 1.34	82 1.11	--	1.8 .11	--	1.00	--	68	50A 0.3	
05/12/75 1515	S-50	42100	10.4 100	50.3F 13.5C	7.4	122	--	--	--	--	--	--	--	--	--	--	--	--	40AF
06/09/75 1500	S-50	25800	9.5 98	62.6F 17.0C	7.6	111	--	--	--	--	--	--	--	--	--	--	--	--	30AF
07/07/75 1505	S-50	7170	8.7 95	68.0F 20.0C	7.8	148	--	--	--	--	--	--	--	--	--	--	--	--	3AF
08/11/75 1450	S-50 S-50	3100	9.1 103	71.0F 22.0C	8.4 7.6	181 183	--	--	6.8 .30 16	-- 0 1.56	95 1.14	--	5.0 .14	--	1.00	--	81	2A 0.3	
09/02/75 1520	S-50	3310	9.9 109	66.9F 2.5C	8.4	19A	--	--	--	--	--	--	--	--	--	--	--	--	2AF
F3		1221.01	KLAMATH RIVER AT OHLEANS																
10/01/74 1030	S-50	2434 2440	10.4 108	62.6F 17.0C	8.6	230	--	--	--	--	--	--	--	--	--	--	--	--	1AF
11/12/74 1240	S-50	3459 3730	11.3 103	51.8F 11.0C	8.0	209	--	--	--	--	--	--	--	--	--	--	--	--	4AF
12/02/74 1200	S-50	3499 4193	11.6 96	44.6F 7.0C	8.2	210	--	--	--	--	--	--	--	--	--	--	--	--	5AF
01/06/75 1320	S-50	11003 17600	12.9 105	42.8F 6.0C	7.5	108	--	--	--	--	--	--	--	--	--	--	--	--	28AF
02/18/75 1145	S-50	818 11800	13.3 108	42.8F 6.0C	6.3	172	--	--	--	--	--	--	--	--	--	--	--	--	12AF
03/10/75 1120	S-50	944 15200	11.7 101	47.3F 8.5C	8.2	103	--	--	--	--	--	--	--	--	--	--	--	--	21AF
04/14/75 1115	S-50 S-50	420 16000	11.0 96	46.2F 9.0C	7.6 8.0	159	--	--	6.4 .28 18	-- 0 1.43	87 1.04	--	1.5 .04	--	1.00	--	65	22A 0.3	
05/12/75 1110	S-50	1167 22000	11.3 108	55.4F 13.0C	7.8	122	--	--	--	--	--	--	--	--	--	--	--	--	18AF
06/09/75 1000	S-50	1157 15800	10.0 100	59.0F 15.0C	6.4	107	--	--	--	--	--	--	--	--	--	--	--	--	11AF
07/07/75 1120	S-50 S-50	4850	9.1 99	68.0F 20.0C	7.9 7.6	133 126	--	--	5.0 .22 16	-- 0 1.16	71 1.10	--	2.8 .08	--	1.00	--	56	1A 0.3	
08/11/75 1105	S-50 S-50	174 2330	9.0 106	74.3F 23.5C	8.2 7.4	180 178	--	--	8.8 .38 21	-- 0 1.56	95 1.15	--	5.4 .15	--	1.10	--	71	1A 0.5	
09/02/75 1105	S-50	174 2320	9.7 135	66.2F 19.0C	8.2	193	--	--	--	--	--	--	--	--	--	--	--	--	2AF
F3		1430.00	KLAMATH RIVER NEAR SEI40 VALLEY																
10/08/74 1125	S-50	196 103	10.2 103	57.2F 14.0C	6.1	244	--	--	--	--	--	--	--	--	--	--	--	--	2AF
11/08/74 0940	S-50	3613	11.7 107	44.1F 9.5C	8.2	189	--	--	--	--	--	--	--	--	--	--	--	--	4AF
12/09/74 1350	S-50	3510	12.4 100	44.6F 7.0C	7.9	204	--	--	--	--	--	--	--	--	--	--	--	--	6AF
01/15/75 1120	S-50	4211	12.2 94	37.6F 3.0C	7.6	200	--	--	--	--	--	--	--	--	--	--	--	--	10AF
02/18/75 1200	S-50	5493	11.6 95	41.0F 5.0C	7.6	211	--	--	--	--	--	--	--	--	--	--	--	--	11AF

TABLE D-2 CONT  
MINERAL ANALYSES OF SURFACE WATER

DATE TIME	SAMPLE LAB	G.P. Q	ON SAT	TEMP	FIELD LABORATORY PH	EC	MINERAL CONSTITUENTS IN				MILLIGRAMS PER LITER MILLIEQUIVALENTS PER LITER PERCENT REACTANCE VALUE				MILLIGRAMS PER LITER					
							CA	MG	NA	K	CO3	HCO3	SO4	CL	NO3	S	P	TDS SUM	TH MCH	TUPB SAR
*****																				
F3 14314.00 KLAMATH RIVER NEAR SEJAO VALLEY CONTINUED																				
03/14/75	55N		12.1	37.4F	7.7	172	--	--	9.8	--	0	94	--	3.8	--	.00	--		78	40A
1505	55N	1446N	93	36.0C	7.7	187	--	--	.43	--	.00	1.54	--	.11	--	--	--			0.5
									22											
04/15/75	55N		11.3	44.2F	8.1	208	--	--	--	--	--	--	--	--	--	--	--			15AF
1230		773.0	102	44.0C																
05/05/75	55N		10.7	51.0F	8.0	195	--	--	--	--	--	--	--	--	--	--	--			10AF
1420		8710	99	51.0C					1.00											
06/03/75	55N		9.5	61.0F	7.8	118	--	--	4.9	--	0	60	--	4.2	--	.00	--		47	25A
1215	55N	897.0	100	61.0C	7.8	114	--	--	.21	--	.00	.98	--	.12	--	--	--		25A	0.3
									18											
07/18/75	55N		8.2	65.3F	7.4	211	--	--	--	--	--	--	--	--	--	--	--			3AF
0735		2420	91	65.3C					.61											
									27											
08/06/75	55N		10.4	60.0F	8.3	201	--	--	--	--	--	--	--	--	--	--	--			8AF
1135		147.0	114	61.0C																
09/18/75	55N		9.1	61.0F	8.2	228	--	--	--	--	--	--	--	--	--	--	--			2AF
0900		1421	94	61.0C																
F3 14714.00 KLAMATH RIVER ABOVE HAMBURG RESERVOIR SITE																				
11/08/74	55N		11.1	44.1F	7.4	193	--	--	--	--	--	--	--	--	--	--	--			5AF
0850		3140E	101	44.1C																
01/15/75	55N		12.4	35.0F	7.4	197	--	--	16	--	0	94	--	5.7	--	.20	--		63	3A
1035	55N	3290E	91	44.0C	7.8	199	--	--	.70	--	.00	1.54	--	.10	--	--	--		3A	0.9
									36											
03/18/75	55N		11.3	44.2F	7.4	193	--	--	14	--	0	103	--	7.5	--	.18	--		83	200A
1400		7746F	91	44.0C	7.5	212	--	--	.61	--	.00	1.69	--	.21	--	--	--		200A	0.7
									27											
05/05/75	55N		10.7	51.0F	8.0	209	--	--	--	--	--	--	--	--	--	--	--			7AF
1320		5000E	102	51.0C																
06/11/75	55N		11.5	47.0F	7.9	195	--	--	--	--	--	--	--	--	--	--	--			5AF
0655			94	47.0C																
07/18/75	55N		8.4	60.0F	8.1	215	--	--	--	--	--	--	--	--	--	--	--			9AF
0845		1100E	97	60.0C																
09/18/75	55N		8.4	60.0F	7.8	223	--	--	--	--	--	--	--	--	--	--	--			2AF
0945		1050E	95	60.0C																
F3 15444.01 KLAMATH RIVER BELOW IRON GATE DAM																				
10/08/74	55N		5.9	51.0F	8.6	205	--	--	--	--	--	--	--	--	--	--	--			2AF
0950		157	63	51.0C																
11/07/74	55N		9.2	51.0F	7.2	178	--	--	17	--	0	96	--	4.0	--	.16	--		57	1A
1630	55N	295	87	51.0C	7.6	183	--	--	.74	--	.00	1.57	--	.11	--	--	--			1.0
									39											
12/09/74	55N		10.4	44.6F	7.2	179	--	--	--	--	--	--	--	--	--	--	--			6AF
1100		2801	93	44.6C																
01/15/75	55N		12.2	35.0F	7.4	163	--	--	--	--	--	--	--	--	--	--	--			10AF
0900		177.	94	35.0C																
02/18/75	55N		12.4	37.4F	7.4	176	--	--	--	--	--	--	--	--	--	--	--			10AF
1015		3101	94	37.4C																
03/18/75	55N		12.1	44.6F	7.5	190	--	--	16	--	0	84	--	4.2	--	.00	--		67	30A
1145	55N	5090	107	44.6C	7.5	190	--	--	.70	--	.00	1.38	--	.12	--	--	--		30A	0.9
									34											
04/15/75	55N		11.4	45.5F	7.8	178	--	--	--	--	--	--	--	--	--	--	--			10AF
0945		4281	104	45.5C																
05/15/75	55N		10.4	51.0F	7.6	188	--	--	16	--	0	82	--	4.2	--	.00	--		56	3A
1135	55N	474.	99	51.0C	7.5				.70	--	.00	1.34	--	.12	--	--	--		3A	0.9
									38											
06/03/75	55N		10.2	62.0F	8.2	183	--	--	--	--	--	--	--	--	--	--	--			3AF
0920		1240	113	62.0C																
07/17/75	55N		9.2	71.0F	8.1	157	--	--	--	--	--	--	--	--	--	--	--			2AF
1435		94.	112	71.0C																
08/06/75	55N		9.1	60.0F	8.4	166	--	--	--	--	--	--	--	--	--	--	--			3AF
0955		94.	109	61.0C																
09/18/75	55N		8.1	66.2F	8.8	197	--	--	--	--	--	--	--	--	--	--	--			1AF
1110		1570	92	66.2C																

TABLE D-2 cont  
MINERAL ANALYSES OF SURFACE WATER

[illegible]

TABLE D-2 CONT  
MINERAL ANALYSES OF SURFACE WATER

DATE TIME	SAMPLE LAB	G.P. Q	NO SAT	TEMP	FIELD LABORATORY PH EC	MINERAL CONSTITUENTS IN										MILLIGRAMS PER LITER					MILLIEQUIVALENTS PER LITER					MILLIGRAMS PER LITER																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
						PERCENT										REACTANCE					VALUE					8					F					TO5					TH					TURB																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									
						CA	MG	NA	K	CO3	HCO3	SO4	CL	NO3		CO3	HCO3	SO4	CL	NO3		CO3	HCO3	SO4	CL	NO3		CO3	HCO3	SO4	CL	NO3		CO3	HCO3	SO4	CL	NO3		CO3	HCO3	SO4	CL	NO3		CO3	HCO3	SO4	CL	NO3		CO3	HCO3	SO4	CL	NO3		CO3	HCO3	SO4	CL	NO3		CO3	HCO3	SO4	CL	NO3		CO3	HCO3	SO4	CL	NO3		CO3	HCO3	SO4	CL	NO3		CO3	HCO3	SO4	CL	NO3		CO3	HCO3	SO4	CL	NO3		CO3	HCO3	SO4	CL	NO3		CO3	HCO3	SO4	CL	NO3		CO3	HCO3	SO4	CL	NO3		CO3	HCO3	SO4	CL	NO3		CO3	HCO3	SO4	CL	NO3		CO3	HCO3	SO4	CL	NO3		CO3	HCO3	SO4	CL	NO3		CO3	HCO3	SO4	CL	NO3		CO3	HCO3	SO4	CL	NO3		CO3	HCO3	SO4	CL	NO3		CO3	HCO3	SO4	CL	NO3		CO3	HCO3	SO4	CL	NO3		CO3	HCO3	SO4	CL	NO3		CO3	HCO3	SO4	CL	NO3		CO3	HCO3	SO4	CL	NO3		CO3	HCO3	SO4	CL	NO3		CO3	HCO3	SO4	CL	NO3		CO3	HCO3	SO4	CL	NO3		CO3	HCO3	SO4	CL	NO3		CO3	HCO3	SO4	CL	NO3		CO3	HCO3	SO4	CL	NO3		CO3	HCO3	SO4	CL	NO3		CO3	HCO3	SO4	CL	NO3		CO3	HCO3	SO4	CL	NO3		CO3	HCO3	SO4	CL	NO3		CO3	HCO3	SO4	CL	NO3		CO3	HCO3	SO4	CL	NO3		CO3	HCO3	SO4	CL	NO3		CO3	HCO3	SO4	CL	NO3		CO3	HCO3	SO4	CL	NO3		CO3	HCO3	SO4	CL	NO3		CO3	HCO3	SO4	CL	NO3		CO3	HCO3	SO4	CL	NO3		CO3	HCO3	SO4	CL	NO3		CO3	HCO3	SO4	CL	NO3		CO3	HCO3	SO4	CL	NO3		CO3	HCO3	SO4	CL	NO3		CO3	HCO3	SO4	CL	NO3		CO3	HCO3	SO4	CL	NO3		CO3	HCO3	SO4	CL	NO3		CO3	HCO3	SO4	CL	NO3		CO3	HCO3	SO4	CL	NO3		CO3	HCO3	SO4	CL	NO3		CO3	HCO3	SO4	CL	NO3		CO3	HCO3	SO4	CL	NO3		CO3	HCO3	SO4	CL	NO3		CO3	HCO3	SO4	CL	NO3		CO3	HCO3	SO4	CL	NO3		CO3	HCO3	SO4	CL	NO3		CO3	HCO3	SO4	CL	NO3		CO3	HCO3	SO4	CL	NO3		CO3	HCO3	SO4	CL	NO3		CO3	HCO3	SO4	CL	NO3		CO3	HCO3	SO4	CL	NO3		CO3	HCO3	SO4	CL	NO3		CO3	HCO3	SO4	CL	NO3		CO3	HCO3	SO4	CL	NO3		CO3	HCO3	SO4	CL	NO3		CO3	HCO3	SO4	CL	NO3		CO3	HCO3	SO4	CL	NO3		CO3	HCO3	SO4	CL	NO3		CO3	HCO3	SO4	CL	NO3		CO3	HCO3	SO4	CL	NO3		CO3	HCO3	SO4	CL	NO3		CO3	HCO3	SO4	CL	NO3		CO3	HCO3	SO4	CL	NO3		CO3	HCO3	SO4	CL	NO3		CO3	HCO3	SO4	CL	NO3		CO3	HCO3	SO4	CL	NO3		CO3	HCO3	SO4	CL	NO3		CO3	HCO3	SO4	CL	NO3		CO3	HCO3	SO4	CL	NO3		CO3	HCO3	SO4	CL	NO3		CO3	HCO3	SO4	CL	NO3		CO3	HCO3	SO4	CL	NO3		CO3	HCO3	SO4	CL	NO3		CO3	HCO3	SO4	CL	NO3		CO3	HCO3	SO4	CL	NO3		CO3	HCO3	SO4	CL	NO3		CO3	HCO3	SO4	CL	NO3		CO3	HCO3	SO4	CL	NO3		CO3	HCO3	SO4	CL	NO3		CO3	HCO3	SO4	CL	NO3		CO3	HCO3	SO4	CL	NO3		CO3	HCO3	SO4	CL	NO3		CO3	HCO3	SO4	CL	NO3		CO3	HCO3	SO4	CL	NO3		CO3	HCO3	SO4	CL	NO3		CO3	HCO3	SO4	CL	NO3		CO3	HCO3	SO4	CL	NO3		CO3	HCO3	SO4	CL	NO3		CO3	HCO3	SO4	CL	NO3		CO3	HCO3	SO4	CL	NO3		CO3	HCO3	SO4	CL	NO3		CO3	HCO3	SO4	CL	NO3		CO3	HCO3	SO4	CL	NO3		CO3	HCO3	SO4	CL	NO3		CO3	HCO3	SO4	CL	NO3		CO3	HCO3	SO4	CL	NO3		CO3	HCO3	SO4	CL	NO3		CO3	HCO3	SO4	CL	NO3		CO3	HCO3	SO4	CL	NO3		CO3	HCO3	SO4	CL	NO3		CO3	HCO3	SO4	CL	NO3		CO3	HCO3	SO4	CL	NO3		CO3	HCO3	SO4	CL	NO3		CO3	HCO3	SO4	CL	NO3		CO3	HCO3	SO4	CL	NO3		CO3	HCO3	SO4	CL	NO3		CO3	HCO3	SO4	CL	NO3		CO3	HCO3	SO4	CL	NO3		CO3	HCO3	SO4	CL	NO3		CO3	HCO3	SO4	CL	NO3		CO3	HCO3	SO4	CL	NO3		CO3	HCO3	SO4	CL	NO3		CO3	HCO3	SO4	CL	NO3		CO3	HCO3	SO4	CL	NO3		CO3	HCO3	SO4	CL	NO3		CO3	HCO3	SO4	CL	NO3		CO3	HCO3	SO4	CL	NO3		CO3	HCO3	SO4	CL	NO3		CO3	HCO3	SO4	CL	NO3		CO3	HCO3	SO4	CL	NO3		CO3	HCO3	SO4	CL	NO3		CO3	HCO3	SO4	CL	NO3		CO3	HCO3	SO4	CL	NO3		CO3	HCO3	SO4	CL	NO3		CO3	HCO3	SO4	CL	NO3		CO3	HCO3	SO4	CL	NO3		CO3	HCO3	SO4	CL	NO3		CO3	HCO3	SO4	CL	NO3		CO3	HCO3	SO4	CL	NO3		CO3	HCO3	SO4	CL	NO3		CO3	HCO3	SO4	CL	NO3		CO3	HCO3	SO4	CL	NO3		CO3	HCO3	SO4	CL	NO3		CO3	HCO3	SO4	CL	NO3		CO3	HCO3	SO4	CL	NO3		CO3	HCO3	SO4	CL	NO3		CO3	HCO3	SO4	CL	NO3		CO3	HCO3	SO4	CL	NO3		CO3	HCO3	SO4	CL	NO3		CO3	HCO3	SO4	CL	NO3		CO3	HCO3	SO4	CL	NO3		CO3	HCO3	SO4	CL	NO3		CO3	HCO3	SO4	CL	NO3		CO3	HCO3	SO4	CL	NO3		CO3	HCO3	SO4	CL	NO3		CO3	HCO3	SO4	CL	NO3		CO3	HCO3	SO4	CL	NO3		CO3	HCO3	SO4	CL	NO3		CO3	HCO3	SO4	CL	NO3		CO3	HCO3	SO4	CL	NO3		CO3	HCO3	SO4	CL

TABLE D-2 cont  
MINERAL ANALYSES OF SURFACE WATER

DATE TIME	SAMPLE LAB	G.W. U	OD SAT	TEMP	FIELD LABORATORY PH EC	MINERAL CONSTITUENTS IN					MILLIGRAMS PER LITER MILLIEQUIVALENTS PER LITER					MILLIGRAMS PER LITER				
						CA	MG	NA	K	CO3	HCO3	SO4	CL	NO3	PERCENT REACTANCE VALUE	8	F	TDS	TH	TURB
.....																				
Fb 1109.00					EEL RIVER AT SCOTIA										CONTINUED					
05/13/75	5:50n	12.53	9.4	65.3F	7.8	144	--	--	3.8	--	0	74	--	1.6	--	.1n	--		63	28A
1235	5:50n	64.2	10.7	16.5C	8.4	142	--	--	.17	--	.00	1.21	--	.05	--	--	--			0.2
								12												
06/10/75	5:50n	11.4n	8.6	71.6F	8.2	187	--	--	--	--	--	--	--	--	--	--	--			64F
1200		15.9n	9.8	22.0C																
07/08/75	5:50n	1.74	9.4	64.8F	8.2	250	--	--	6.8	--	0	128	--	5.7	--	.10	--		113	2A
1245	5:50n	.42	10.5	21.0C	8.1	241	--	--	.30	--	.00	2.10	--	.16	--	--	--			0.3
								12												
08/12/75	5:50n	1.05	8.6	66.9F	8.0	311	--	--	--	--	--	--	--	--	--	--	--			14F
1110	5:50n	1.05	9.7	21.5C																
		1.34																		
09/03/75	5:50n	4.93	9.5	7.7F	8.0	299	--	--	--	--	--	--	--	--	--	--	--			04F
1405		1.45	10.7	21.5C																
Fb 1134.50					EEL RIVER AT SOUTH FORK															
10/02/74	5:50n		9.5	64.4F	7.4	330	--	--	--	--	--	--	--	--	--	--	--			14F
1605		2n	10.8	18.0C																
11/13/74	5:50n		10.5	55.4F	8.3	338	--	--	10	--	0	136	--	10	--	.20	--		153	0A
1445	5:50n	1.4	10.0	13.0C	8.3	350	--	--	.44	--	.00	2.26	--	.26	--	--	--			0.4
								13												
12/03/74	5:50n		10.2	5.9F	8.0	270	--	--	7.4	--	0	111	--	5.8	--	.20	--		117	70A
143n	5:50n	23.1	9.2	1.5C	8.4	264	--	--	.33	--	.00	1.82	--	.16	--	--	--			0.3
								12												
01/07/75	5:50n		11.7	47.3F	8.4	105	--	--	--	--	--	--	--	--	--	--	--			352AF
143n		21400	10.0	8.5C																
02/19/75	5:50n		11.3	46.2F	7.4	121	--	--	4.6	--	0	66	--	.8	--	.10	--		58	590A
165n	5:50n	26600	9.8	7.0C	7.7	125	--	--	.20	--	.00	1.08	--	.02	--	--	--			0.3
								15												
03/11/75	5:50n		10.9	46.2F	8.4	131	--	--	--	--	--	--	--	--	--	--	--			162AF
131n		13800	9.4	4.0C																
04/15/75	5:50n		10.4	51.6F	7.6		--	--	3.8	--	0	79	--	1.7	--	.00	--		69	31A
1400	5:50n	438n	9.1	11.0C	8.4	154	--	--	.17	--	.00	1.29	--	.05	--	--	--			0.2
								11												
05/13/75	5:50n		9.4	63.5F	7.4	133	--	--	--	--	--	--	--	--	--	--	--			43AF
132n		421	9.8	17.5C																
06/10/75	5:50n		9.4	63.5F	7.4	160	--	--	3.3	--	0	77	--	.9	--	.00	--		65	10A
1435	5:50n	120n	9.8	17.5C	7.4	147	--	--	.14	--	.00	1.26	--	.03	--	--	--			0.2
								10												
07/08/75	5:50n		9.5	71.6F	8.1	219	--	--	--	--	--	--	--	--	--	--	--			14F
1330		24.7	10.8	2.0C																
08/12/75	5:50n		8.4	64.8F	7.8	285	--	--	6.8	--	0	145	--	5.0	--	.10	--		135	0A
115n	5:50n	6n	9.8	21.0C	7.4	267	--	--	.30	--	.00	2.38	--	.14	--	--	--			0.3
								10												
09/03/75	5:50n		9.5	66.9F	7.4	283	--	--	7.6	--	0	139	--	7.4	--	.10	--		132	0A
1455	5:50n	57	10.5	21.5C	8.2	285	--	--	.33	--	.00	2.28	--	.21	--	--	--			0.3
								11												
Fb 1329.50					EEL RIVER ABOVE OUTLET CREEK NEAR UDS M105															
10/03/74	5:50n		9.2	62.6F	8.1	236	--	--	8.8	--	0	114	--	3.7	--	.40	--		96	0A
0930	5:50n	7.4	9.4	17.0C	8.1	244	--	--	.38	--	.00	1.87	--	.10	--	--	--			0.4
								17												
11/14/74	5:50n		10.5	52.7F	7.4	274	--	--	--	--	--	--	--	--	--	--	--			04F
092n		25	9.9	11.5C																
12/04/74	5:50n		10.3	50.0F	7.6	154	--	--	--	--	--	--	--	--	--	--	--			1304F
0900	5:50n	1510	9.4	1.0C																
01/08/75	5:50n		11.5	48.2F	7.6	93	--	--	--	--	--	--	--	--	--	--	--			1504F
1335		375n	10.3	4.0C																
02/20/75	5:50n		12.2	44.8F	7.7	94	--	--	4.2	--	0	51	--	.3	--	.20	--		44	180A
0945	5:50n	4n	10.4	7.0C	7.5	97	--	--	.18	--	.00	.84	--	.11	--	--	--			0.3
								17												
03/12/75	5:50n		10.4	46.4F	8.1	115	--	--	--	--	--	--	--	--	--	--	--			49AF
0715		235n	9.7	8.0C																
04/16/75	5:50n		10.5	51.0F	7.6		--	--	4.6	--	0	80	--	4.5	--	.10	--		70	5A
1025	5:50n	312	9.6	1.0C	8.0	158	--	--	.20	--	.00	1.41	--	.13	--	--	--			0.2
								13												
05/14/75	5:50n		9.3	57.2F	7.6	135	--	--	--	--	--	--	--	--	--	--	--			124F
1005		744	9.1	14.0C																
06/11/75	5:50n		7.8	69.8F	8.0	176	--	--	--	--	--	--	--	--	--	--	--			24F
0755		62	9.0	21.0C																



TABLE D-2 CONT  
MINERAL ANALYSES OF SURFACE WATER

DATE TIME	SAMPLE L-H	G.M. V	OU SAT	TEMP	FIELD LABORATORY PH EC	MINERAL CONSTITUENTS IN										MILLIGRAMS PER LITER MILLIEQUIVALENTS PER LITER PERCENT DISSOLVED VALUE										MILLIGRAMS PER LITER										TUBS SAR
						CA	MG	NA	K	CO3	HCO3	SO4	CL	NO3	B	F	TDS SUM	TH MG	TM	TURB SR																
FEL RIVER ABOVE OUTLET CREEK NEAR DOOS RIOS																																				
CONTINUED																																				
07/09/75 0930	5.5N		14	73.4F 23.0C	8.2	230	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	04F		
08/13/75 0915	5.5N		5.8	73.4F 23.0C	8.1	242	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	14F		
09/04/75 0945	5.5N		6.5	73.4F 23.0C	8.2	227 228	--	--	9.5 .41 18	--	0 .00 1.70	104 1.70	--	4.4 .12	--	.30	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	95 0.4	04	
FEL RIVER ABOVE OUTLET CREEK NEAR LONGVALE																																				
10/03/74 0905	5.5N		2.44 1.74	54.9F 12.7C	8.2	320 331	--	--	16 .70 22	--	0 .00 1.44	144 2.36	--	23 .65	--	2.20	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	121 0.6	04	
11/14/74 0855	5.5N		2.61 1.74	54.9F 12.7C	7.2	343	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	14F		
12/04/74 0945	5.5N		4.4 1.74	46.4F 8.0C	7.4	85 83	--	--	3.5 .15 18	--	0 .00 1.54	33 .54	--	1.0 .03	--	.20	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	34 0.3	110A	
01/08/75 1210	5.5N		7.64 3.30N	48.2F 9.0C	7.1	64	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	75AF		
02/20/75 0855	5.5N		6.6	48.2F 9.0C	7.2	58 56	--	--	3.0 .17 26	--	0 .00 1.46	28 .46	--	1.0 .03	--	.20	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	24 0.3	130A	
03/12/75 1145	5.5N		4.2 6.27	51.8F 11.0C	7.4	103	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	10AF		
04/16/75 1045	5.5N		2.10 1.74	51.8F 11.0C	7.6	138	--	--	5.5 .24 17	--	0 .00 1.15	70 1.15	--	5.0 .16	--	.20	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	57 0.3	24	
05/14/75 1030	5.5N		2.43 0.1	54.9F 12.7C	7.6	163	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	14F		
06/11/75 0730	5.5N		1.01 1.4	64.0F 17.8C	8.2	230	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	14F		
07/09/75 1005	5.5N		1.71 1.42	75.2F 24.0C	8.1	256	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	14F		
08/13/75 0940	5.5N		1.37 1.5	71.6F 22.0C	8.2	293	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	14F		
09/04/75 1000	5.5N		1.38 1.4	64.0F 17.8C	8.1	294 295	--	--	17 .74 24	--	0 .00 2.23	136 2.23	--	26 .56	--	2.10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	115 0.7	04	
FEL RIVER MIDDLE FORK AT DOOS RIOS																																				
10/03/74 1000	5.5N		7.29 1.2	46.4F 8.0C	8.1	357	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	14F		
11/14/74 0950	5.5N		7.23 5.7	51.8F 11.0C	8.1	371	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	04F		
12/04/74 0945	5.5N		11.36 4.10	46.4F 8.0C	7.6	154	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	383AF		
01/08/75 1415	5.5N		13.44 4.64	46.4F 8.0C	8.1	42 113	--	--	3.2 .14 12	--	0 .00 1.93	57 1.93	--	.7 .02	--	.10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	52 0.2	370A	
02/20/75 1040	5.5N		14.00 1.10	42.0F 5.6C	7.4	104 105	--	--	4.2 .16 15	--	0 .00 1.93	57 1.93	--	.0 .00	--	.10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	50 0.3	360A	
03/12/75 0800	5.5N		11.51 2.20	46.4F 8.0C	7.6	138	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	86AF		
04/16/75 0945	5.5N		1.69 1.40	46.4F 8.0C	7.5	145	--	--	3.2 .14 10	--	0 .00 1.21	74 1.21	--	.7 .02	--	.10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	86 0.2	40A	
05/14/75 0915	5.5N		12.27 3.45	51.8F 11.0C	7.4	92	--	--	1.9 .08 9	--	0 .00 1.79	48 1.79	--	.0 .00	--	.00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	42 0.1	150A	
06/11/75 0825	5.5N		4.42 6.17	62.0F 17.0C	7.6	126 119	--	--	2.5 .11 9	--	0 .00 1.97	59 1.97	--	1.9 .05	--	.00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	54 0.1	8A	
07/09/75 0855	5.5N		7.07 1.31	70.7F 21.5C	8.1	215 204	--	--	4.9 .21 10	--	0 .00 1.62	99 1.62	--	4.2 .12	--	.10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	95 0.2	04	
08/13/75 0835	5.5N		7.48 4.2	71.6F 22.0C	7.8	282	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	04F		

MINERAL ANALYSES OF SURFACE WATER

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MINERAL ANALYSES OF SURFACE WATER

CONTINUED

TABLE D-3

MINOR ELEMENT ANALYSIS OF SURFACE WATER

Lab and Sampler Agency Code

5050 - Department of Water Resources

Abbreviations

<u>TIME</u>	- Pacific Standard Time on a 24-hour clock
<u>DISCH</u>	- Instantaneous discharge in cubic feet per second
<u>EC</u>	- Electrical conductance in micromhos at 25° Celsius
<u>TEMP</u>	- Water temperature at time of sampling in degrees Fahrenheit (F) and Celsius (C)
<u>PH</u>	- Measure of acidity (<7) or alkalinity (>7) of water
<u>CHROM (ALL)</u>	- All chromium
<u>CHROM (HEX)</u>	- Hexavalent chromium
<u>D</u>	- Dissolved
<u>T</u>	- Total

TABLE D-3  
MINOR ELEMENT ANALYSIS OF SURFACE WATER

DATE TIME	SAMP L&H	TEMP PH	ARSENIC	CONSTITUENTS MARIUM CADMIUM	IN MILLIGRAMS CHROM (ALL) CHROM (HEX)	NEW LITER COPPER IRON	LEAD MANGANESE	MERCURY SELENIUM	SILVER ZINC				
F0 1300.00 SMITH RIVER NEAR CRESCENT CITY													
04/15/75 0700	5:00 5:00	8.2 C 8.2	-- --	0.00 0.00	T T	-- --	0.00 0.11	T T	0.01 0.00	T T	-- --	0.00 0.00	T T
F2 1050.00 SHASTA RIVER NEAR YREKA													
03/18/75 1250	5:00 5:00	8.2 C 8.2	-- --	0.02 0.02	T T	-- --	0.02 1.2	T T	0.00 0.54	T T	-- --	0.04 0.04	T T
05/05/75 1220	5:00 5:00	12.2 C 9.2	-- --	0.00 0.00	T T	-- --	0.00 0.18	T T	0.01 0.02	T T	-- --	0.01 0.01	T T
F2 5250.00 SCOTT RIVER NEAR FORT JONES													
05/05/75 1635	5:00 5:00	11.2 C 7.4	-- --	0.00 0.00	T T	-- --	0.00 1.2	T T	0.00 0.43	T T	-- --	0.02 0.02	T T
F3 1100.00 KLAMATH RIVER NEAR KLAMATH													
04/14/75 1435	5:00 5:00	10.2 C 7.4	-- --	0.00 0.00	T T	-- --	0.01 6.3	T T	0.00 0.09	T T	-- --	0.01 0.01	T T
F3 1200.00 KLAMATH RIVER AT OULEANS													
04/14/75 1115	5:00 5:00	9.2 C 7.4	-- --	0.00 0.00	T T	-- --	0.00 2.6	T T	0.00 0.04	T T	-- --	0.00 0.00	T T
F3 1430.00 KLAMATH RIVER NEAR SEJAO VALLEY													
03/18/75 1505	5:00 5:00	3.2 C 7.7	-- --	0.00 0.00	T T	-- --	0.02 1.2	T T	0.00 0.45	T T	-- --	0.03 0.03	T T
F3 1549.00 KLAMATH RIVER NEAR IRON GATE DAM													
03/14/75 1145	5:00 5:00	7.2 C 7.4	-- --	0.00 0.00	T T	-- --	0.00 3.1	T T	0.00 0.49	T T	-- --	0.01 0.01	T T
05/05/75 1135	5:00 5:00	10.2 C 7.4	-- --	0.00 0.00	T T	-- --	0.00 0.43	T T	0.00 0.03	T T	-- --	0.01 0.01	T T
F4 1000.00 TRINITY RIVER AT HOUDA													
04/14/75 1005	5:00 5:00	9.2 C 7.4	-- --	0.00 0.00	T T	-- --	0.01 4.6	T T	0.00 0.06	T T	-- --	0.01 0.01	T T
F4 1370.00 TRINITY RIVER NEAR HURST MARCH													
05/12/75 0910	5:00 5:00	11.2 C 7.4	-- --	0.00 0.00	T T	-- --	0.00 0.94	T T	0.00 0.03	T T	-- --	0.01 0.01	T T
F4 1440.00 TRINITY RIVER AT LEWISTON													
05/12/75 0730	5:00 5:00	9.2 C 7.4	-- --	0.00 0.00	T T	-- --	0.00 0.36	T T	0.00 0.01	T T	-- --	0.00 0.00	T T
F5 1100.00 MAD RIVER NEAR ARCATO													
05/12/75 1325	5:00 5:00	10.2 C 8.4	-- --	0.00 0.00	T T	-- --	0.00 2.3	T T	0.00 0.06	T T	-- --	0.01 0.01	T T
F5 5100.00 REDWOOD CREEK AT CHICK													
04/14/75 1350	5:00 5:00	11.2 C 7.2	-- --	0.00 0.00	T T	-- --	0.01 0.8	T T	0.01 0.10	T T	-- --	0.02 0.02	T T
F6 1140.00 EEL RIVER AT SCOTIA													
04/15/75 1245	5:00 5:00	10.2 C 7.4	-- --	0.00 0.00	T T	-- --	0.00 3.1	T T	0.00 0.04	T T	-- --	0.01 0.01	T T
F6 1154.00 EEL RIVER AT SOUTH FORK													
04/15/75 1400	5:00 5:00	11.2 C 7.4	-- --	0.00 0.00	T T	-- --	0.00 3.0	T T	0.00 0.04	T T	-- --	0.01 0.01	T T
F6 1329.50 EEL RIVER ABOVE OUTLET CREEK NEAR UOS RIOS													
04/16/75 1025	5:00 5:00	10.2 C 7.4	-- --	0.01 0.01	T T	-- --	0.00 0.45	T T	0.00 0.01	T T	-- --	0.00 0.00	T T
F6 1351.00 OUTLET CREEK NEAR LUMBALE													
04/16/75 1045	5:00 5:00	11.2 C 7.4	-- --	0.01 0.01	T T	-- --	0.00 0.33	T T	0.00 0.01	T T	-- --	0.00 0.00	T T
F6 3009.00 EEL RIVER MIDDLE FORK AT UOS RIOS													
04/16/75 0945	5:00 5:00	7.2 C 7.4	-- --	0.00 0.00	T T	-- --	0.01 0.4	T T	0.00 0.07	T T	-- --	0.01 0.01	T T
F6 3059.00 MILL CREEK NEAR COVELO													
04/16/75 0905	5:00 5:00	8.2 C 7.4	-- --	0.00 0.00	T T	-- --	0.00 0.37	T T	0.00 0.01	T T	-- --	0.00 0.00	T T
F6 3203.00 BLACK BUTTE RIVER NEAR COVELO													
04/16/75 0745	5:00 5:00	8.2 C 7.4	-- --	0.01 0.01	T T	-- --	0.00 2.2	T T	0.01 0.03	T T	-- --	0.01 0.01	T T
F6 4100.00 EEL RIVER SOUTH FORK NEAR MIRANDA													
04/15/75 1430	5:00 5:00	10.5 C 8.3	-- --	0.00 0.00	T T	-- --	0.00 1.68	T T	0.00 0.01	T T	-- --	0.00 0.00	T T



TABLE D-3 cont  
 MINOR ELEMENT ANALYSIS OF SURFACE WATER

DATE TIME	SAMP LAB	TEMP °F	TEMP °C	ARSENIC	CONSTITUENTS IN MILLIGRAMS PER LITER				LEAD	MANGANESE	MERCURY SILVER	SILVER ZINC
					NADIUM	CHROM (TALL)	COPPER	IRON				
					CADMIUM	CHROM (HEX)						
FD 4279.00 VAN DUZEN RIVER NEAR BRIDGEMVILLE												
04/15/75 5 30		8.0		--	--	--	0.00	T	0.00	T	--	--
11:40 5 30		7.4	--	--	0.00	T	2.1	T	0.02	T	--	0.01 T

## TABLE D-4

## NUTRIENT ANALYSIS OF SURFACE WATER

Lab and Sampler Agency Code

5050 - Department of Water Resources

Abbreviations

<u>TIME</u>	- Pacific Standard Time on a 24-hour clock
<u>G.H.</u>	- Instantaneous gage height in feet above an established datum
<u>Q</u>	- Instantaneous discharge measured in cubic feet per second (cfs). "E" indicates the value has been estimated.
<u>TEMP</u>	- Water temperature in degrees Fahrenheit (F) or Celsius (C)
<u>TURB</u>	- Jackson Turbidity Units measured with a Hellige Turbidimeter (E) or a Hach Nephelometer (A)
<u>PH</u>	- Measure of acidity or alkalinity of water
<u>EC</u>	- Electrical conductance in micromhos at 25° C.
<u>HCO<sub>3</sub></u>	- Bicarbonate
<u>CO<sub>3</sub></u>	- Carbonate

Nitrogen Series as N

NO <sub>2</sub>	- Unfiltered nitrite
NH <sub>3</sub>	- Unfiltered ammonia
NO <sub>3</sub>	- Unfiltered nitrate
ORG N	- Organic nitrogen
DIS ORG N	- Dissolved organic nitrogen
NH <sub>3</sub> + ORG N	- Ammonia plus organic nitrogen

Phosphorus Series as P

DIS A.H.PO <sub>4</sub>	- Dissolved acid hydrolyzable phosphate
D O-PO <sub>4</sub>	- Dissolved orthophosphate
T O-PO <sub>4</sub>	- Total orthophosphate
D TOT P	- Dissolved total phosphorus
TOT P	- Total phosphorus



TABLE D-4  
NUTRIENT ANALYSIS OF SURFACE WATER

DATE TIME	SAMP LNR	TEMP F-°C	F-EC LAB EC	FIELD				NUTRIENT CONSTITUENTS IN MILLIGRAMS PER LITER										O TOT P
				TUHH F-COP	CACODI CACODI	P T	O 402 + NO3 T 443	U NO2 O NO3	O 400 N T 446 N	U 443 + T 446 N	U 443 + T 446 N	U 443 + T 446 N	U 443 + T 446 N	U 443 + T 446 N	U 443 + T 446 N			
F0 1300.00 SMITH RIVER NEAR CHEFSCENT CITY																		
04/15/75	5:30	6.7C	4.2		1A		--	--	--	--	--	--	--	0.01	--	0.01	--	--
0700	5:30			86			--	0.01	--	0.0	--	--	--	--	--	--	--	0.01
F2 1050.00 SHASTA RIVER NEAR YREKA																		
03/18/75	5:30	6.7C	4.2	335	104AF		--	--	--	--	--	--	--	0.34	--	1.5	--	0.23
1250	5:30						--	--	--	--	--	--	--	--	--	--	--	0.70
05/05/75	5:30	12.0C	6.2		1A		--	--	--	--	--	--	--	0.01	--	0.6	--	0.09
1220	5:30			517			--	--	--	--	--	--	--	--	--	--	--	0.12
F2 5250.00 SCOTT RIVER NEAR FORT JONES																		
05/05/75	5:30	11.0C	7.6		7A		--	--	--	--	--	--	--	0.19	--	0.2	--	0.00
1630	5:30			176			--	--	--	--	--	--	--	--	--	--	--	0.05
F3 1100.00 KLAMATH RIVER NEAR KLAMATH																		
04/14/75	5:30	10.1C	7.6		30A		--	--	--	--	--	--	--	0.07	--	0.2	--	0.02
1435	5:30			150			--	--	--	--	--	--	--	--	--	--	--	0.24
F3 1220.01 KLAMATH RIVER AT OHLEANS																		
04/14/75	5:30	9.0C	7.6		22A		--	--	--	--	--	--	--	0.14	--	0.2	--	0.03
1115	5:30			159			--	--	--	--	--	--	--	--	--	--	--	0.06
F3 1430.00 KLAMATH RIVER NEAR SETAO VALLEY																		
03/14/75	5:30	3.1C	7.7	172	104AF		--	--	--	--	--	--	--	0.40	--	1.0	--	0.10
1505	5:30						--	--	--	--	--	--	--	--	--	--	--	0.40
06/03/75	5:30	14.0C	7.8	116	25A		--	--	--	--	--	--	--	0.15	--	--	--	0.01
1210	5:30			114			--	--	--	--	--	--	--	--	--	--	--	--
F3 1540.01 KLAMATH RIVER RELU IRON GATE DAM																		
11/07/74	5:30	10.1C	7.2	176	103AF		--	--	--	--	--	--	--	0.75	--	--	--	0.17
1830	5:30						--	--	--	--	--	--	--	--	--	--	--	--
03/18/75	5:30	7.1C	7.5	190	21AF		--	--	--	--	--	--	--	0.50	--	1.0	--	0.14
1145	5:30						--	--	--	--	--	--	--	--	--	--	--	0.26
05/05/75	5:30	10.0C	7.8		3A		--	--	--	--	--	--	--	0.10	--	0.6	--	0.06
1135	5:30			188			--	--	--	--	--	--	--	--	--	--	--	0.10
F4 1050.00 TRINITY RIVER AT MUDDA																		
01/06/75	5:30	6.1C	7.8	122	44A		--	--	--	--	--	--	--	0.05	--	--	--	0.00
1215	5:30						--	--	--	--	--	--	--	--	--	--	--	--
03/12/75	5:30	46.5E	7.5	141	65A		--	--	--	--	--	--	--	0.03	--	0.2	--	0.01
1050	5:30						--	--	--	--	--	--	--	--	--	--	--	0.13
04/14/75	5:30	9.1C	7.6		38A		--	--	--	--	--	--	--	0.01	--	--	--	0.01
1005	5:30			148			--	--	--	--	--	--	--	0.01	--	--	--	0.21
05/12/75	5:30	12.1C	4.2		22A		--	--	--	--	--	--	--	0.11	--	--	--	0.00
1010	5:30			115			--	--	--	--	--	--	--	0.12	--	--	--	--
06/04/75	5:30	14.1C	7.4	114	10A		--	--	--	--	--	--	--	0.05	--	--	--	0.02
0900	5:30			114			--	--	--	--	--	--	--	--	--	--	--	--
09/02/75	5:30	20.1C	8.0	190	0A		--	--	--	--	--	--	--	0.10	--	--	--	0.00
1200	5:30						--	--	--	--	--	--	--	--	--	--	--	--
F4 1300.00 TRINITY RIVER NEAR HURST HANCH																		
03/12/75	5:30			142	25A		--	--	--	--	--	--	--	0.05	--	0.1	--	0.01
1415	5:30						--	--	--	--	--	--	--	--	--	--	--	0.07
05/12/75	5:30	11.5C	7.4		8A		--	--	--	--	--	--	--	0.00	--	--	--	0.01
0910	5:30			98			--	--	--	--	--	--	--	--	--	--	--	0.03
F4 1600.00 TRINITY RIVER AT LEWISTON																		
11/12/74	5:30	8.1C	7.4	78	38F		--	--	--	--	--	--	--	0.05	--	--	--	0.00
0630	5:30						--	--	--	--	--	--	--	--	--	--	--	--
01/05/75	5:30	6.1C	6.4	80	0A		--	--	--	--	--	--	--	0.22	--	--	--	0.00
0900	5:30						--	--	--	--	--	--	--	--	--	--	--	--
05/12/75	5:30	9.1C	7.5		1A		--	--	--	--	--	--	--	0.00	--	--	--	0.00
0730	5:30			78			--	--	--	--	--	--	--	0.00	--	--	--	0.01
F5 1100.00 MAD RIVER NEAR AMCATY																		
05/12/75	5:30	14.0C	6.0		27A		--	--	--	--	--	--	--	0.01	--	--	--	0.01
1320	5:30			107			--	--	--	--	--	--	--	--	--	--	--	0.06
F5 5100.00 HEDWOOD CREEK AT WICK																		
04/14/75	5:30	11.0C	7.2		72A		--	--	--	--	--	--	--	0.04	--	0.2	--	0.02
1350	5:30			94			--	--	--	--	--	--	--	--	--	--	--	0.11
F6 1100.00 ELL RIVER AT SCOTIA																		
04/15/75	5:30	10.5C	7.6		24A		--	--	--	--	--	--	--	0.00	--	--	--	0.01
1245	5:30			160			--	--	--	--	--	--	--	0.00	--	--	--	0.06
F6 1150.40 ELL RIVER AT SOUTH FORK																		
04/15/75	5:30	11.0C	7.6		31A		--	--	--	--	--	--	--	0.02	--	0.1	--	0.01
1400	5:30			154			--	--	--	--	--	--	--	--	--	--	--	0.03



TABLE D-4 cont

NUTRIENT ANALYSIS OF SURFACE WATER

DATE TIME	SAMP Lab	TEMP	F-W-M	FIELD					NUTRIENT CONSTITUENTS IN MILLIGRAMS PER LITER												O TOT P						
				pH	EC	TURB	CAC03	P	O NO2	O NO3	N NH3	N NH4	N NO2	N NO3	N NH3	P PO4	A NH4										
F6 1324.50 EEL RIVER ABOVE OUTLET CREEK NEAR DOS RIOS																											
10/03/74	5:30	17.0	C	8.1	236	0AF			--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.01	--	--	--
0930	5:30								--	--	0.03	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
02/20/75	5:30	7.0	C	7.7	94	108AF			--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.00	--	--	--
0945	5:30								--	--	0.10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
04/14/75	5:30	15.0	C	7.6		5A			--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.01	--	--	--
1025	5:30				158				--	--	0.01	--	--	0.0	--	--	--	--	--	--	--	--	--	--	--	0.01	--
09/04/75	5:30	20.0	C	8.2	227	0A			--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.01	--	--	--
0945	5:30								--	--	0.10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
F6 1324.00 OUTLET CREEK NEAR LONGVALE																											
04/14/75	5:30	11.0	C	7.0		2A			--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.01	--	--	--
1045	5:30				138				--	--	0.02	--	--	0.1	--	--	--	--	--	--	--	--	--	--	--	0.01	--
F6 3004.01 EEL RIVER MIDDLE FORK AT DOS RIOS																											
01/04/75	5:30	7.0	C	8.1	92	370A			--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.01	--	--	--
1415	5:30								--	--	0.12	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
02/20/75	5:30	6.0	C	7.9	104	280AF			--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.02	--	--	--
1045	5:30								--	--	0.09	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
04/14/75	5:30	7.0	C	7.5		40A			--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.01	--	--	--
0945	5:30				145				--	--	0.02	--	--	0.1	--	--	--	--	--	--	--	--	--	--	--	0.03	--
05/14/75	5:30	11.0	C	7.8		150A			--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.00	--	--	--
0915	5:30				92				--	--	0.05	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
06/11/75	5:30	17.0	C	7.6	126	0A			--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.01	--	--	--
0925	5:30				119				--	--	0.05	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
07/09/75	5:30	21.5	C	8.1	215	1AF			--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.01	--	--	--
0955	5:30								--	--	0.03	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
F6 3005.00 MILL CREEK NEAR COVELO																											
02/20/75	5:30	9.0	C	8.1	121	70AF			--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.06	--	--	--
1120	5:30								--	--	0.15	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
04/16/75	5:30	8.0	C	7.0		2A			--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.02	--	--	--
0905	5:30				209				--	--	0.06	--	--	0.1	--	--	--	--	--	--	--	--	--	--	--	0.03	--
05/14/75	5:30	14.5	C	7.0		0A			--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.02	--	--	--
0935	5:30				262				--	--	0.07	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
F6 3204.00 BLACK BUTTE RIVER NEAR COVELO																											
12/04/74	5:30	7.0	C	7.0	142	108AF			--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.02	--	--	--
1155	5:30								--	--	0.10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
04/16/75	5:30	4.0	C	7.0		10A			--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.00	--	--	--
0745	5:30				141				--	--	0.06	--	--	0.0	--	--	--	--	--	--	--	--	--	--	--	0.02	--
07/08/75	5:30	24.0	C	8.1	210	1AF			--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.00	--	--	--
1700	5:30								--	--	0.02	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
08/12/75	5:30	26.0	C	8.2	251	1AF			--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.00	--	--	--
1600	5:30								--	--	0.03	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
09/04/75	5:30	17.0	C	8.0	276	1A			--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.00	--	--	--
0700	5:30								--	--	0.10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
F6 4104.00 EEL RIVER SOUTH FORK NEAR MIDLAND																											
04/15/75	5:30	10.5	C	8.3		0A			--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.02	--	--	--
1430	5:30				142				--	--	0.02	--	--	0.1	--	--	--	--	--	--	--	--	--	--	--	0.03	--
F6 5273.00 VAN DUZEN RIVER NEAR MARIJUVILLE																											
04/15/75	5:30	4.0	C	7.4		17A			--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.01	--	--	--
1140	5:30				110				--	--	0.01	--	--	0.1	--	--	--	--	--	--	--	--	--	--	--	0.04	--

## TABLE D-5

### PESTICIDES IN SURFACE WATER

All samples were collected and analyzed for pesticides by the Department of Water Resources (5050).

All samples were analyzed for two groups of pesticides, chlorinated organic compounds and organic phosphorus compounds. All pesticides detected are included in Table D-5. Other pesticides in these groups were absent or below detectable levels.

#### Pesticides

BHC	-	Benzene hexachloride
DDT	-	Dichloro diphenyl trichloroethane
ppDDD	-	Para para isomer of dichloro diphenyl dichloroethane
ppDDT	-	Para para isomer of dichloro diphenyl trichloroethane

When two pesticides are reported together with a slash mark separating them (ppDDE/Dieldrin, Simazine/Atrazine, etc.), the reported concentration is an undifferentiated total of the two. Either of the two pesticides could make up the entire total.

TABLE D-5

DATE TIME	SAMP LAB	TEMP DO EC PH	PESTICIDES IN SURFACE WATER COMPOUNDS REPORTED IN MILLIGRAMS/LITER			OTHER
			CHLORINATED HYDROCARBON	ORGANIC PHOSPHORUS		
		F2 1300.00	SMITH RIVER NEAR CRESCENT CITY			
04/15/75 5:00 0700		8.0C 11.9 8.2	NONE DETECTED	NONE DETECTED		
		F2 1850.00	SHASTA RIVER NEAR YUBA			
05/05/75 5:00 1220		17.0C 10.2 8.2	NONE DETECTED	NONE DETECTED		
		F2 5200.00	SCOTT RIVER NEAR FORT JONES			
05/05/75 5:00 1835		11.0C 10.0 7.6	NONE DETECTED	NONE DETECTED		
		F3 1100.00	KLAMATH RIVER NEAR KLAMATH			
04/14/75 5:00 1435		10.0C 10.8 7.6	NONE DETECTED	NONE DETECTED		
		F3 1599.01	KLAMATH RIVER BELOW IRON GATE DAM			
05/05/75 5:00 1135		10.0C 10.4 7.8	NONE DETECTED	NONE DETECTED		
		F4 1800.00	TRINITY RIVER AT MOOPA			
04/14/75 5:00 1005		9.0C 10.9 7.6	NONE DETECTED	NONE DETECTED		
		F4 1376.00	TRINITY RIVER NEAR HUNTS RANCH			
05/12/75 5:00 0910		11.5C 10.4 7.4	NONE DETECTED	NONE DETECTED		
		F6 1100.00	EEL RIVER AT SCOTIA			
04/15/75 5:00 1245		10.5C 10.2 7.6	NONE DETECTED	NONE DETECTED		
		F6 5279.00	VAN DUSEN RIVER NEAR BRIDGEMOUNTAIN			
04/15/75 5:00 1140		8.0C 11.4 7.4	NONE DETECTED	NONE DETECTED		



APPENDIX E  
GROUND WATER QUALITY

This appendix presents ground water quality data collected during the period from October 1, 1974, through September 30, 1975. The data were collected from a number of major ground water sources in the north coastal area in cooperation with local agencies. During the 1975 water year, 92 wells were sampled in 10 ground water basins.

At the time of field sampling, pH, specific conductance, and temperature measurements are made. The results are compared with measurements made in previous years. If a substantial change is noted, the samples are submitted to the laboratory for further analyses.

Laboratory analyses of ground waters are performed in accordance with "Standard Methods for the Examination of Water and Waste Water", 13th Edition, 1971.

The Region and Basin and State Well Numbering Systems are described in Appendix C, "Ground Water Measurements".

TABLE E-1

## MINERAL ANALYSES OF GROUND WATER

An explanation of column headings follows:

The LAB and SAMPLER agency code is as follows:

5050	- California Department of Water Resources
<u>TIME</u>	- Pacific Standard Time on a 24-hour clock
<u>TEMP</u>	- Water temperature in degrees Fahrenheit or degrees Celsius. The computer prints out both.
<u>PH LAB &amp; FIELD</u>	- Measure of acidity or alkalinity of water
<u>EC LAB</u>	- The electrical conductance in micromhos at 25° Celsius
<u>EC FIELD</u>	- The electrical conductance in micromhos at time of field sampling
<u>TDS</u>	- Gravimetric determination of total dissolved solids at 180° Celsius
<u>SUM</u>	- Total dissolved solids determined by addition of analyzed constituents
<u>TH</u>	- Total hardness
<u>NCH</u>	- Noncarbonate hardness
<u>SAR</u>	- Sodium adsorption ratio
<u>PERCENT</u> <u>REACTANCE</u> <u>VALUE</u>	- Determined by dividing the sum of the cations or anions in milliequivalents per liter into each constituent in milliequivalents per liter arriving at a percentage. For a partial analysis, an approximate value is determined by multiplying the electrical conductance by 0.01 and using that as the cation or anion sum.

The MINERAL CONSTITUENTS are as follows:

B	- Boron	K	- Potassium
CA	- Calcium	MG	- Magnesium
CL	- Chloride	NA	- Sodium
CO <sub>3</sub>	- Carbonate	NO <sub>3</sub>	- Nitrate
F	- Fluoride	SI0 <sub>2</sub>	- Silica
HCO <sub>3</sub>	- Bicarbonate	SO <sub>4</sub>	- Sulfate



TABLE E-1  
MINERAL ANALYSES OF GROUND WATER

DATE TIME	SAMPLER LAB	TEMP	FIELD LABORATORY PH	EC	MINERAL CONSTITUENTS IN				MILLIGRAMS PER LITER MILLIEQUIVALENTS PER LITER PERCENT REACTANCE VALUE				MILLIGRAMS PER LITER						
					CA	MG	NA	K	CO3	HCO3	SO4	CL	NO3	B	F	TDS SUM	TH NCH	SAR	
.....																			
1-01 NORTH COASTAL REGION SMITH RIVER PLAIN																			
09/10/75 1345	5USN	16N/01#-02001	M	56.0F 13.3C	6.8	185	--	--	--	--	--	--	--	--	--	--	--		
09/10/75 1615	5USN	16N/01#-20H01	M	56.0F 14.4C	6.3	180	--	--	--	--	--	--	--	--	--	--	--		
09/10/75 1650	5USN	16N/02#-13E01	M	6.0F 15.5C	6.7	445	--	--	--	--	--	--	--	--	--	--	--		
09/10/75 1430	5USN 5N50	17N/01#-03E01	M	57.0F 13.9C	7.0 6.3	295 293	10 30	29 2.38	3.0 .17	4.3 .11	0 .00	171 2.80	7.0 .15	4.6 .13	5.7 .09	.00 3	167 149	144 6	0.1
09/10/75 1420	5USN	17N/01#-04J01	M	56.0F 14.4C	7.0	305	--	--	--	--	--	--	--	--	--	--	--		
09/10/75 1405	5USN	17N/01#-14C02	M	61.0F 16.1C	6.7	180	--	--	--	--	--	--	--	--	--	--	--		
09/10/75 1530	5USN 5USN	18N/01#-05K01	M	56.0F 14.4C	6.1 7.6	183 179	11 .55	4.7 .39	14 .61	4 .01	0 .00	35 .57	5.4 .11	19 .54	25.0 .40	.00	140 97	46 19	0.9
09/10/75 1510	5USN	18N/01#-26M01	M	67.0F 19.4C	6.6	100	--	--	--	--	--	--	--	--	--	--	--		
09/10/75 1445	5USN	18N/01#-34M02	M	59.0F 15.0C	6.8	295	--	--	--	--	--	--	--	--	--	--	--		
1-02 Klamath River Basin																			
06/11/75 1215	5USN 5USN	46N/02E-15F01	M	56.0F 13.3C	7.5	183 155	--	--	--	--	--	--	6.9 .19	3.5 .06	--	--	46		
06/11/75 1240	5USN 5USN	47N/02E-20C01	M	48.0F 8.9C	6.8 6.2	3500 3320	240 11.98	136 11.18	176 7.66	10 .26	0 .00	159 2.61	436 9.08	520 14.66	764 4.26	.20	2070 1460	1160 1020	2.3
1-03 BUTTE VALLEY																			
06/11/75 1135	5USN	45N/01E-09C02	M	57.0F 13.9C	7.7	208	--	--	--	--	--	--	--	--	--	--	--		
06/11/75 1310	5USN	47N/01E-06A02	M	55.0F 12.8C	7.9	1080	--	--	--	--	--	--	--	--	--	--	--		
06/11/75 1320	5USN 5USN	47N/01E-06J01	M	55.0F 12.6C	7.8 8.7	1500 1330	21 1.05	28 2.30	242 10.53	22 .56	36 1.20	552 9.05	126 2.62	62 1.75	4.0 .06	1.10	847 814	169 0	0.1
06/12/74 1005	5USN 5USN	47N/01E-07C02	M	64.0F 17.8C	7.9 7.32	750 732	--	--	--	--	--	--	50 1.41	2.7 .04	--	--	157		
06/12/75 1010	5USN	47N/01E-07C03	M	70.0F 20.4C	8.4	460	--	--	--	--	--	--	--	--	--	--	--		
06/12/75 0925	5USN	47N/01E-08H01	M	62.0F 16.7C	7.2	760	--	--	--	--	--	--	--	--	--	--	--		
06/12/75 1145	5USN	47N/01E-32A01	M	7.0F 21.1C	8.1	222	--	--	--	--	--	--	--	--	--	--	--		
06/11/75 1415	5USN	48N/01E-30F01	M	55.0F 12.8C	7.9	400	--	--	--	--	--	--	--	--	--	--	--		

TABLE E-1 cont

MINERAL ANALYSES OF GROUND WATER

[illegible]

TABLE E-1 cont  
MINERAL ANALYSES OF GROUND WATER

DATE TIME	SAMPLE LAB	TEMP	FIELD		MINERAL CONSTITUENTS IN							MILLIGRAMS PER LITER MILLIEQUIVALENTS PER LITER PERCENT REACTANCE VALUE				MILLIGRAMS PER LITER				
			LABORATORY PH	EC	CA	MG	NA	K	CO3	HCO3	SO4	CL	NO3	B	F	TDS SUM	TH MG	SAR		
NORTH COASTAL MCGUIN SHASTA VALLEY																				
1-24																				
06/18/75 1300	5.50 5.40	42N/150-20J01	M	50.0F 12.2C	6.4 307	--	--	--	--	--	--	--	3.5 1.10	1.1 1.02	--	--		129		
06/18/75 1330	5.50	42N/160-10J01	M	57.0F 13.9C	7.3 570	--	--	--	--	--	--	--	--	--	--	--				
06/18/75 1545	5.50	43N/160-07M01	M	70.0F 24.4C	6.8 2400	--	--	--	--	--	--	--	--	--	--	--				
06/18/75 1525	5.50	43N/150-02C01	M	52.0F 11.1C	6.6 260	--	--	--	--	--	--	--	--	--	--	--				
06/18/75 1350	5.50 5.50	43N/160-21M01	M	50.0F 10.4C	7.3 6.1 308	505 1.45	24 1.56 43	19 1.56 46	7.9 1.14 10	2.4 0.02 1	0 0.00 0.00	1.3 3.18 40	0.1 1.17 5	2.0 1.06 2	0.8 1.11 3	107 109	150 0	0.3		
06/18/75 1500	5.50 5.50	44N/150-32C03	M	60.0F 19.9C	7.2 1090 482	--	--	--	--	--	--	--	--	5.4 1.52	0.0 1.10	--	--	393		
06/18/75 1440	5.50 5.50	44N/160-15C01	M	53.0F 17.2C	7.3 600 530	--	--	--	--	--	--	--	--	26 1.73	20.0 1.32	--	--	233		
06/18/75 1420	5.50 5.50	44N/160-22M01	M	60.0F 19.5C	6.8 670 468	31 1.55 42	22 1.91 37	33 1.44 30	1.6 0.04 1	0 0.00 0.00	219 3.59 73	14 2.29 6	21 1.59 12	10.0 1.48 10	207 261	108 0	1.1			
06/20/75 1000	5.50	45N/150-00C01	M	60.0F 21.5C	6.3 1025	--	--	--	--	--	--	--	--	--	--	--				
06/20/75 0815	5.50 5.50	45N/160-19C01	M	60.0F 17.4C	7.7 350 336	--	--	--	--	--	--	--	--	3.0 1.08	1.8 1.03	--	--	108		
06/20/75 0940	5.50	45N/160-20M01	M	67.0F 19.4C	6.3 510	--	--	--	--	--	--	--	--	--	--	--				
06/20/75 0925	5.50 5.50	45N/160-27C02	M	50.0F 15.0C	6.2 605 566	--	--	--	--	--	--	--	--	27 1.56	29.0 1.47	--	--	220		
06/19/75 0800	5.50 5.50	45N/160-30C01	M	65.0F 19.3C	7.5 480 453	--	--	--	--	--	--	--	--	10 1.26	29.0 1.47	--	--	192		
1-25																				
SCOTT RIVER VALLEY																				
06/19/75 1430	5.50	46N/160-02M01	M	50.0F 12.2C	7.2 590	--	--	--	--	--	--	--	--	--	--	--				
06/19/75 1050	5.50 5.50	46N/160-27C01	M	56.0F 16.3C	6.6 105 85	--	--	--	--	--	--	--	--	1.0 1.00	3.0 1.05	--	--	30		
06/19/75 1045	5.50	47N/160-20M02	M	50.0F 15.0C	6.4 150	--	--	--	--	--	--	--	--	--	--	--				
06/19/75 1215	5.50	43N/160-00C01	M	55.0F 12.8C	6.6 120	--	--	--	--	--	--	--	--	--	--	--				
06/19/75 1230	5.50	43N/160-00M01	M	55.0F 12.8C	6.1 125	--	--	--	--	--	--	--	--	--	--	--				
06/19/75 1120	5.50	43N/160-20C02	M	70.0F 21.1C	6.7 80	--	--	--	--	--	--	--	--	--	--	--				
06/19/75 1150	5.50	43N/160-11C01	M	50.0F 15.0C	6.9 70	--	--	--	--	--	--	--	--	--	--	--				

TABLE E-1 cont

DATE TIME	SAMPLE L-#	TFR LABORATORY	FIELD		MINERAL CONSTITUENTS IN				MILLIGRAMS PER LITER				MILLIEQUIVALENTS PER LITER				PERCENT REACTANCE VALUE				MILLIGRAMS PER LITER			
			PH	PC	Ca	Mg	Na	K	CU3	NC03	SO4	CL	NO3	F	TD5	TH	SAR	TD5	TH	SAR				
NORTH COASTAL PELIUN SCOTT RIVER VALLEY																								
1																								
1-r5																								
06/19/75	5:50	44N/ 44-34401	M	66.0F	6.8	66	--	--	--	--	--	--	--	--	--	--	--	--	--	--				
1345				14.9C																				
1-r6																								
31N/12W-12L01		M	54.0F	6.2	250	22	12	6.2	.4	0	132	.8	2.5	.1	.00	--	132	103	0.3					
06/09/75	5:50			12.2C	8.3	219	1.18	.49	.27	.2	2.18	.02	.07	.00	--	109	0							
1210	5:50						.46	.42	.11	1	.96	1	.3											
31N/12W-15K1		M	51.0F	6.7	394	--	--	--	--	--	--	20	.2	--	--	--	157							
06/09/75	5:50			13.9C		345						.56	.00											
1150	5:50																							
1-r8																								
45N/1E-04H04		M	61.0F	6.1	480	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--				
09/12/75	5:50			16.1C																				
0900																								
46N/1E-07H01		M	6.0F	6.5	520	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--				
09/11/75	5:50			15.5C																				
0955																								
46N/1E-08H01		M	57.0F	6.1	180	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--				
09/12/75	5:50			13.9C																				
1010																								
46N/1E-19H01		M	62.0F	7.5	375	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--				
09/11/75	5:50			16.7C																				
1040																								
46N/1E-01H01		M	55.0F	6.1	145	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--				
09/11/75	5:50			14.8C																				
0935																								
1-r9																								
45N/1E-18H01		M	62.0F	7.4	855	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--				
09/12/75	5:50			16.7C																				
0815																								
45N/1E-20H01		M	64.0F	6.6	295	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--				
09/12/75	5:50			12.2C																				
0840																								
46N/1E-08H01		M	61.0F	7.4	168	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--				
09/11/75	5:50			16.1C																				
1320																								
46N/1E-16H01		M	54.0F	7.6	465	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--				
09/11/75	5:50			14.0C																				
1355																								
46N/1E-17H01		M	61.0F	7.1	183	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--				
09/11/75	5:50			16.1C																				
1330																								
45N/1E-29H01		M	6.0F	6.6	315	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--				
09/12/75	5:50			15.5C																				
1045																								
1-r10																								
42N/1W-04D01		M	54.0F	6.8	575	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--				
09/11/75	5:50			15.0C																				
1510																								
42N/1W-07F01		M	54.0F	7.0	465	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--				
09/12/75	5:50			15.3C																				
1400																								
43N/1W-18A01		M	54.0F	7.3	460	16	18	61	1.2	11	222	26	15	3.9	.00	.1	254	117	2.5					
09/11/75	5:50			15.0C	8.0	474	.80	1.48	2.65	.03	.37	3.64	.54	.42	.06	--	261	0						
1445	5:50						16	30	2.6	.53	1	72	11	.6	1									
43N/1W-32Q01		M	66.0F	8.4	840	26	26	81	2.7	0	40	1.4	225	1.0	.00	--	471	173						
09/12/75	5:50			16.9C	7.6	855	1.30	2.14	3.52	.07	.00	.03	6.33	.62	--	263	134	2.7						
1330	5:50						18	30	.60	1			.90											
43N/1W-35H01		M	54.0F	6.4	700	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--				
09/11/75	5:50			12.2C																				
1605																								

MINERAL ANALYSES OF GROUND WATER

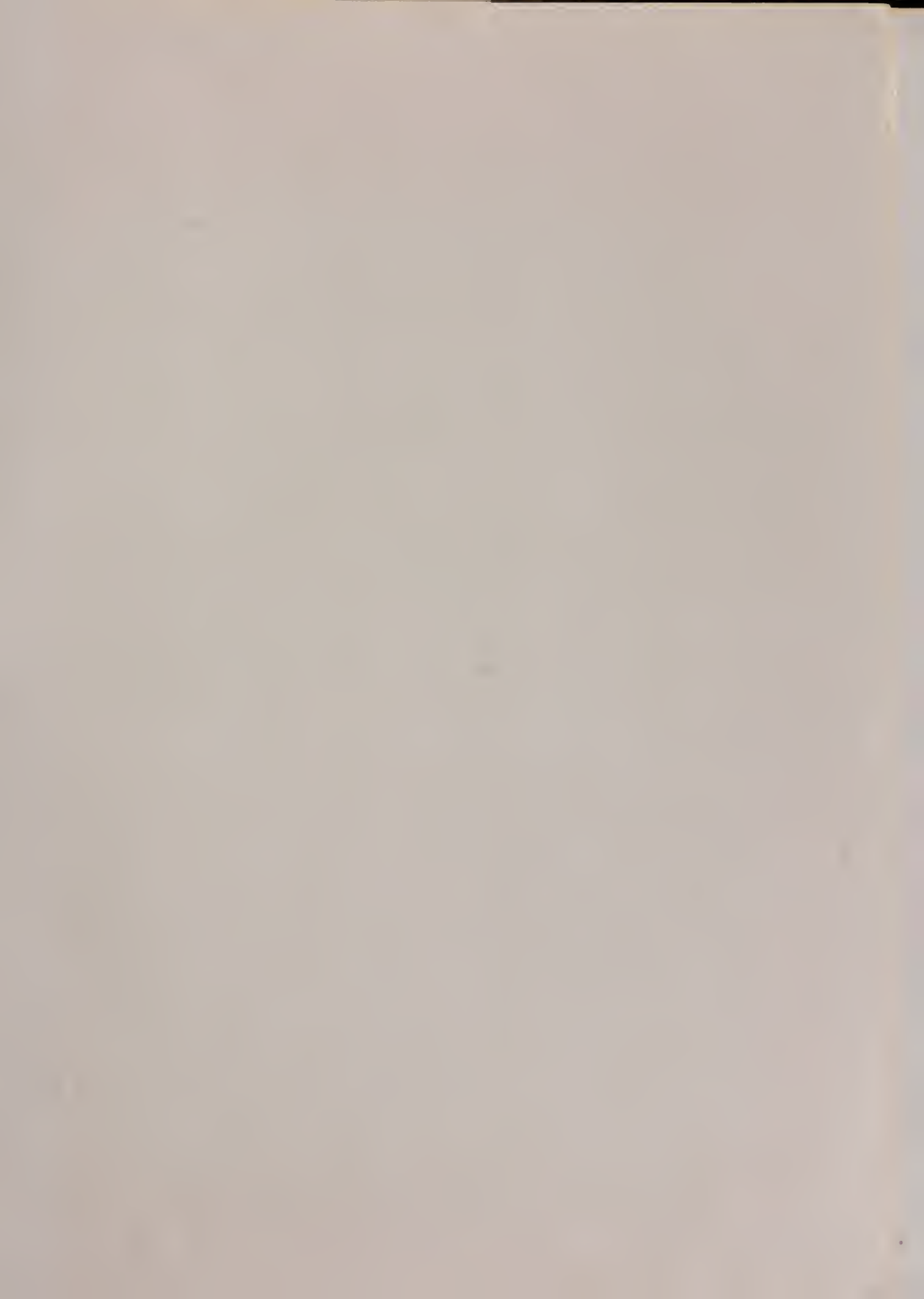
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